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PRACTICAL SOCIAL SCIENCE



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PRACTICAL SOCIAL SCIENCE

A LABORATORY TEXTBOOK

BY

JOHN A. LAPP, LL.D.

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PREFACE

It is the aim of this book to provide a manual for the teaching of practical social science by the laboratory method. The book is in design a laboratory text. It is intended to fill the need, generally felt, for the study of social science in the high school, but is devoid of theoretical sociology. In the opinion of the author such theoretical study is beyond the realm of high-school instruction. The primary object has been to mobilize the concrete social data of the community for analysis and determination. The most essential materials of the Census Bureau, of the various government departments, and of certain great national organizations and research bureaus have been brought together as the basis for the work of the students.

Series of problems are given following each group of data to enable the student to draw for himself the principal conclusions. One of the main exercises is the making of comparisons. The gathering of the latest data through personal investigation and from reports, the constant revision of the book to date by the student himself, and the preparation of diagrams and tables for local data similar to the general diagrams and tables used in the book are the laboratory practices designed for the regular work of the class.

Briefly summed up the ends sought to be achieved in this book are:

1. To give the essential data of social science in the concrete.

2. To make it necessary for the student to handle and interpret this concrete social data by requiring him to work out actual problems.

3. To familiarize the student with statistical tables and their uses.

4. To enable the student to measure the tendencies in any given field in comparison with other communities or periods of time.

5. To train the student in the collection of further data.

6. To arouse his interest in the interpretation of such data and in making valid comparisons.

7. To encourage the student to use the social data supplied by the government, local, state, or national, or by other dependable agencies of research.

8. To develop discrimination in the use of social information.

The subject matter has a wide range, but we must comprehend it if we are to interpret correctly the many current questions in social, economic, and civic life. The citizen is called upon to decide great social issues at the polls, and upon his decisions often turn grave consequences. If he is not to be misled by misstatements and half truths, if he is to be guided by the truth, he must learn to distinguish with accuracy what are true and what are false statistics, data, and conclusions. In the maze of social information one is likely to be misled by clever propagandists. It is the aim of these chapters to set the citizen on guard against plausible but untruthful social data and to acquaint him with some of the common errors of fact and conclusion, at the same time bringing to him the sources of the more dependable compilations of social and economic facts and statistics.

When the students have worked through the problems of this book it may be expected that they will have a clear acquaintance with the sources of the most important information which they need as citizens and also that they will have a command of the tools which they will need for the study of sociology in college.

The study here outlined, to be effective, requires the collection in a special library of the books and reports which are indicated for use. Most of these may be obtained free of charge or at very small cost. So far as possible the work of collecting them should be done by the students. This will require advance planning so that the materials for each chapter will be at hand when the chapter is reached. The examples set down in each chapter are not intended to be exhaustive. Each table offers numerous additional opportunities for more detailed analysis if time permits and it seems desirable.

The tables and diagrams used have been taken largely from official publications, the most important source being the reports of the United States Census Bureau.

The author presents this book in the hope that it will aid the many teachers who have been striving to teach community problems concretely by using the community as a laboratory for observation and comparison.

JOHN A. LAPP

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PART I

THE CITIZEN AND SOCIETY

PRACTICAL SOCIAL SCIENCE

CHAPTER I

THE FIELD OF STUDY

The study of social science starts with the individual in his relationship to his fellowmen. The individual comes first in nature, and all social organization is based upon him as the primal unit. Individuals form the family, which is the next unit in nature. In all times among all civilized and semi-civilized people, the family has existed and its place has been recognized. The individuals and families form the state, which is organized through government. These three — the individual, the family, and the state — constitute the framework of social organization. Within this structure there are various other groupings of individuals to form clubs, fraternal societies, coöperative organizations, labor unions, employers' organizations; of individuals and families to form churches; and of governments to form international leagues. We are concerned in social science with the protection of the normal life of the individual and the family and with the operation of community life and government to that end.

In the study of social science we deal with individuals, their work and well-being, and with the problems which arise from living and working together in society. We consider such subjects as the growth of population; the

family and the changes affecting family life, the migration of people from place to place; the occupations of the workers and the production of goods; the distribution of people in city and country; standards of living; education, health, poverty, and dependency; conservation of community resources; coöperative and public enterprises; and the problems of the people's government such as majority rule, representation, taxation, public expenditures, and public debts.

Each person has a direct interest in the study of these matters, because each is a unit in society and has a voice in the management of affairs. Each is concerned with the well-being of all. No one can justly be indifferent to the problems of society for the reason that all people profit by the general good and each may be a victim of the ills of society. For his own as well as the general welfare, each promotes the best interests of all.

Each person receives a direct benefit from association in society with his fellows. Each does his part in community life by engaging in some occupation by which needed goods or services are provided, and is able in return to secure the means of living and enjoyment from the products and services which hundreds of other people have provided. Each depends upon all and all depend upon each. Some produce one thing and some another; some engage in producing, others in transporting goods; some engage in selling goods, others in professional occupations and personal service.

The people join in many common enterprises through coöperative organizations or through the government. They provide jointly for education, parks and playgrounds, streets and highways, police and fire protection, and the protection of health. Each receives a benefit from such

community work and each pays a share of the cost in proportion to his ability.

We cannot view the system by which our wants are supplied without a recognition of mutual dependence. No one is self-sufficient. Each of us would be deprived of many of the comforts and necessaries of life if we had to depend upon our own work to produce all we needed. The people of any community would likewise be deprived of many things if they could not secure from other communities the goods which could not be made at home. Likewise the whole people of the country would suffer if we could not import needed products from abroad.

The whole scheme of present-day economic society is built upon the division of labor by which each person does a part, sometimes a very tiny part, in the production of the things which we use for pleasure, comfort, and necessity. Communities and countries also specialize, with the result that they send their products to the ends of the earth and receive products for their own use in return.

We learn readily how dependent we are upon all countries when war or other calamities interfere with the regular processes for the international exchange of products. Our dependence upon each country for certain products is then strikingly disclosed. We learn also how the interruption of transportation or production of a necessity, such as coal, soon begins to interfere with our comforts and even to threaten our existence. We find constantly also how much our lives depend upon the work done by all classes of people. If the miners should stop mining coal for a considerable time, industries would stop and the people would suffer hardships. If the railroads should fail to furnish cars, the coal could not be transported. If the railroad men, freight

handlers, longshoremen, or delivery men were to refuse to work, or if there were not enough men or enough equipment to carry on the work, the people could not be supplied. It is likewise with the food supply. For necessaries of life we depend upon the farmers who produce the raw materials; upon the manufacturers who prepare it; upon the dealers who handle it; upon roads, railroads, canals, and steamships which transport it; and upon the banks and the money system which make exchange possible on a large scale. In this process of production and exchange, each group of workers depends on others and all are indispensable in some degree in supplying the common needs.

There must be a broader knowledge of the problems of all people and communities if social problems are to be settled with justice to all. We cannot understand the problems of a great country like the United States unless we know something about the people and their work in all parts of the country. Men living on farms in Iowa can hardly know the problems of an industrial state like Massachusetts, nor can the workers of Massachusetts know the problems of the farmers of Iowa. But they must know enough about each other's problems to do justice to the whole. No one should act for himself alone; but each person and the people of each community and state should strive to understand the common needs of all and to do justice to all. One of the first lessons is to see how necessary each worker is to the whole; how necessary each part of the country is to every other part; and how interdependent are the people of all nations.

Since economic society is made for man and not man for economic society, we must keep uppermost the question how man himself fares in the midst of the economic web

which he has woven for his good. We study, therefore, the normal life of the individual and family and the causes and effects of the breakdown of the normal life. Questions of income and cost of living, and of dependency, poverty, and crime, must be answered if we are to know how society reacts upon the individual, and if we are to help to stabilize the social order for the good of humanity.

Enough has been said to show the importance of studying people — their work and well-being. The good of the people is the purpose of modern organized society and government. If bad results come, it should be the common purpose of all to check them lest all may suffer. The people act together through their government to pass laws to promote good and restrain evil and to protect and promote the well-being of individual and family life. They provide works for common use, such as roads, parks, schools, and hospitals, or for common protection, such as fire, police, and health departments. Modern society is an example of a great coöperative undertaking in which the good of each is bound up in the well-being of all.

Sources for Research

The following books should be at hand for research work:

1. The *Abstract of the Fourteenth Census* is a summary of the Census of 1920. It is a storehouse of social and economic information. It may be obtained for the school free of charge by addressing your United States Senator or Congressman, or it may be purchased at a small price from the Superintendent of Public Documents, Washington, D. C. A similar publication will not be issued until after the Census of 1930.

2. The *Statistical Abstract of the United States* is an annual publication prepared by the U. S. Department of Commerce. It contains a summary of the latest social and economic information, including brief summaries of census data, statistics of education, charities, pro-

duction, commerce, and similar materials. It is an all-round reference book for up-to-date data on matters within the range of this book. A copy may be obtained for the school as indicated for the *Abstract of the Fourteenth Census* above.

3. The New York *World Almanac*, the Chicago *Daily News Almanac*, and similar publications are invaluable sources of summaries and fresh information for many of the subjects in this book. Copies may be obtained from the publishers at a small price (usually 35 cents).

4. The complete volumes of the Census of 1920 are valuable in this study for intensive research. While the *Abstract of the Fourteenth Census* contains most of the data needed, the full volumes are essential to get details relating to specific cities, counties, and townships. These volumes should be in the public library and may be consulted there, or they may be obtained for the school by special request to your United States Senator or Congressman.

Each chapter indicates special sources for research. The study of this subject will be most successful if the public reports indicated are secured for the latest year available, and other material gathered in the community is added to the collection. The essence of the field and research work contemplated in this book is the collection and comparison of the data for the latest years with the data contained in its chapters. In this way the student will learn to use the sources of the latest authentic information.

Each student should be required to keep a properly bound notebook for all new data.

CHAPTER II

POPULATION AND ITS DISTRIBUTION

The Growth of Population

The people of the United States have been enumerated every ten years since 1790. The purpose of the enumeration is primarily to learn the number of people in order to distribute the representatives in Congress to each state on the basis of population, and the first enumerations were merely countings of the people. In later years, however, a great deal of other valuable information has been gathered, and we depend now upon the United States Census to learn our true condition. The census serves the same purpose for society as an inventory of a stock of goods on hand serves the merchant. It might well be called the social inventory of the country.

The following table shows the population of the country for each successive census since 1790.

Table 1. — Population of the United States: 1790–1920

Year	Population	Year	Population
1790	3,929,214	1860	31,443,321
1800	5,308,483	1870	38,558,371
1810	7,239,881	1880	50,155,783
1820	9,638,453	1890	62,947,714
1830	12,866,020	1900	75,994,575
1840	17,069,453	1910	91,972,266
1850	23,191,876	1920	105,710,620

Examples

1. What was the percentage rate of increase in each decade?
2. In which decade was the largest numerical increase and in which the highest rate?
3. What was the average annual increase from 1910 to 1920?
4. What was the average increase per month from 1910 to 1920? Per day? (April 1, 1910 to Jan. 1, 1920.)

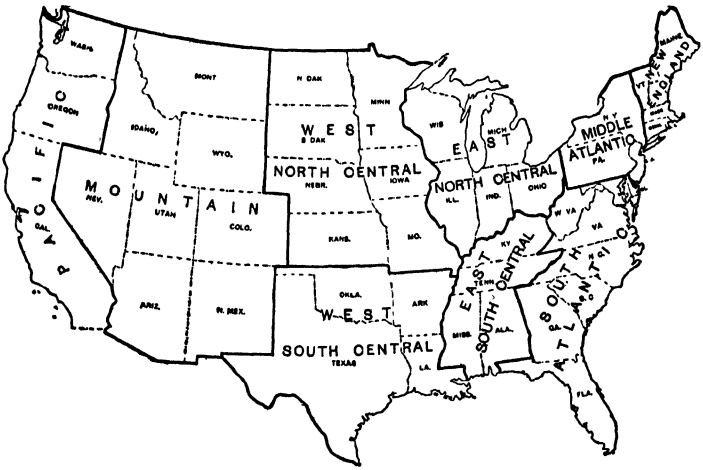


FIGURE 1. — GEOGRAPHIC DIVISIONS OF THE UNITED STATES AS DESIGNATED BY THE U. S. CENSUS BUREAU

The conquering of a continent is told in the growth of population. Beginning in 1790 with scarcely four million people settled principally in a narrow strip on the Atlantic seaboard, the march of population has gone steadily forward until the continent is spanned and its habitable lands largely taken up. If we examine carefully the next table we shall see the steps, decade by decade, of the grand march of conquest. By 1800 the Alleghanies had been crossed by thousands settling in Ohio, Indiana, Kentucky, and Ten-

nessee. By 1830 these states had large populations, and the pioneers had pushed through into Illinois and Missouri and were beginning to press farther north into Michigan. In 1850 the growth of the Northwest was well under way. Wisconsin and Iowa had considerable population and a trickling of people appeared in Minnesota. California was the next to be populated, the growth being spectacular between 1850 and 1860 on account of the discovery of gold. The building of transcontinental railways in the sixties and seventies rapidly filled in the gaps between until all parts of the country were partially peopled. The last twenty years have seen vast growth in nearly all sections but especially in the industrial centers.

Table 2 shows the land area of each state in 1920 and its population for each census year.

From this table many interesting facts may be worked out. The percentage of increase in each state may be determined and compared with that in other states; density of population at each period in each state may be found; the history of the successive flows of people into new territories may be worked out by the growth of population in each state. Care should be exercised if right conclusions are to be drawn from this table. For example, density of population means nothing unless the conditions are considered. Nevada has one person to a square mile and a half, but Nevada has little rainfall and most of the state is a desert. Rhode Island is very small in area and yet contains a large city and several smaller ones — a fact which causes the appearance of great density throughout the entire state. Texas with its two hundred and sixty-two thousand square miles has large areas which cannot support more than a meager population.

TABLE 2. — POPULATION OF THE UNITED STATES AT EACH CENSUS, BY STATES, 1790–1920, AND LAND AREA

[Source: Reports of the Bureau of the Census]

STATE	1790	1800	1810	1820	1830
Alabama				127,901	309,527
Arizona					
Arkansas			1,062	14,273	30,388
California					
Colorado					
Connecticut	237,946	251,002	261,942	275,248	297,675
Delaware	59,096	64,273	72,674	72,749	76,748
District of Columbia		14,093	24,023	33,039	39,834
Florida					34,730
Georgia	82,548	162,686	252,433	340,989	516,823
Idaho					
Illinois			12,282	55,211	157,445
Indiana		5,641	24,520	147,178	343,031
Iowa					
Kansas					
Kentucky	73,677	220,955	406,511	564,317	687,917
Louisiana			76,556	153,407	215,739
Maine	96,540	151,719	228,705	298,335	399,455
Maryland	319,728	341,548	380,546	407,350	447,040
Massachusetts	378,787	422,845	472,040	523,287	610,408
Michigan			4,762	8,896	31,639
Minnesota					
Mississippi		8,850	40,352	75,448	136,621
Missouri			19,783	66,586	140,455
Montana					
Nebraska					
Nevada					
New Hampshire	141,885	183,858	214,460	244,161	269,328
New Jersey	184,139	211,149	245,562	277,575	320,823
New Mexico					
New York	340,120	589,051	959,049	1,372,812	1,918,608
North Carolina	393,751	478,103	555,500	638,829	737,987
North Dakota					
Ohio		45,365	230,760	581,434	937,903
Oklahoma					
Oregon					
Pennsylvania	434,373	602,365	810,091	1,049,458	1,348,233
Rhode Island	68,825	69,122	76,931	83,059	97,199
South Carolina	249,073	345,591	415,115	502,741	581,185
South Dakota					
Tennessee	35,691	105,602	261,727	422,823	681,904
Texas					
Utah					
Vermont	85,425	154,465	217,895	235,981	280,652
Virginia	747,610	880,200	974,600	1,065,366	1,211,405
Washington					
West Virginia					
Wisconsin					
Wyoming					
Total	3,929,214	5,308,483	7,239,881	9,638,453	12,866,020

TABLE 2 (*Continued*). — POPULATION OF THE UNITED STATES AT EACH CENSUS, BY STATES, 1790–1920, AND LAND AREA

[Source: Reports of the Bureau of the Census]

STATE	1840	1850	1860	1870	1880
Alabama	590,756	771,623	964,201	996,992	1,262,505
Arizona				9,658	40,440
Arkansas	97,574	209,897	435,450	484,471	802,525
California		92,597	379,994	560,247	864,694
Colorado			34,277	39,864	194,327
Connecticut	309,978	370,792	460,147	537,454	622,700
Delaware	78,085	91,532	112,216	125,015	146,608
District of Columbia	43,712	51,687	75,080	131,700	177,624
Florida	54,477	87,445	140,424	187,748	269,493
Georgia	691,392	906,185	1,057,286	1,184,109	1,542,180
Idaho				14,999	32,610
Illinois	476,183	851,470	1,711,951	2,539,891	3,077,871
Indiana	685,866	988,416	1,350,428	1,680,637	1,978,301
Iowa	43,112	192,214	674,913	1,194,020	1,624,615
Kansas			107,206	364,399	996,096
Kentucky	779,828	982,405	1,155,684	1,321,011	1,648,690
Louisiana	352,411	517,762	708,002	726,915	939,946
Maine	501,793	583,169	628,279	626,915	648,936
Maryland	470,019	583,034	687,049	780,894	934,943
Massachusetts	737,699	994,514	1,231,066	1,457,351	1,783,085
Michigan	212,267	397,654	749,113	1,184,059	1,636,937
Minnesota		6,077	172,023	439,706	780,773
Mississippi	375,651	606,526	791,305	827,922	1,131,597
Missouri	383,702	682,044	1,182,012	1,721,295	2,168,380
Montana				20,595	39,159
Nebraska			28,841	122,993	452,402
Nevada			6,857	42,491	62,266
New Hampshire	284,574	317,976	326,073	318,300	346,991
New Jersey	373,306	489,555	672,035	906,096	1,131,116
New Mexico		61,547	93,516	91,874	119,565
New York	2,428,921	3,097,394	3,880,735	4,382,759	5,082,871
North Carolina	753,419	869,039	992,622	1,071,361	1,399,750
North Dakota					
Ohio	1,519,467	1,980,329	2,339,511	2,665,260	3,198,062
Oklahoma					
Oregon		13,294	52,465	90,923	174,768
Pennsylvania	1,724,033	2,311,786	2,906,215	3,521,951	4,282,891
Rhode Island	108,830	147,545	174,620	217,353	276,531
South Carolina	594,398	668,507	703,708	705,606	995,577
South Dakota			4,837	14,181	135,177
Tennessee	829,210	1,002,717	1,109,801	1,258,520	1,542,359
Texas		212,592	604,215	818,579	1,591,749
Utah		11,380	40,273	86,786	143,963
Vermont	291,948	314,120	315,098	330,551	332,286
Virginia	1,239,797	1,421,661	1,596,318	1,225,163	1,512,565
Washington			11,594	23,955	75,116
West Virginia				442,014	618,457
Wisconsin	30,945	305,391	775,881	1,054,670	1,315,497
Wyoming				9,118	20,789
Total	17,069,453	23,191,876	31,443,321	38,558,371	50,155,783

TABLE 2 (*Continued*). — POPULATION OF THE UNITED STATES AT EACH CENSUS, BY STATE, 1790–1920, AND LAND AREA

[Source: Reports of the Bureau of the Census]

STATE	1890	1900	1910	1920	LAND AREA IN SQ. MI.
Alabama	1,513,401	1,828,697	2,138,093	2,348,174	51,279
Arizona	88,243	122,931	204,354	334,162	113,810
Arkansas	1,128,211	1,311,564	1,574,449	1,752,204	52,525
California	1,213,398	1,485,053	2,377,549	3,426,861	155,652
Colorado	413,249	539,700	799,024	939,629	103,658
Connecticut	746,258	908,420	1,114,756	1,380,631	4,820
Delaware	168,493	184,735	202,322	223,003	1,965
District of Columbia	230,392	278,718	331,069	437,571	60
Florida	391,422	528,542	752,619	968,470	54,861
Georgia	1,837,353	2,216,331	2,609,121	2,895,832	58,725
Idaho	88,548	161,772	325,594	431,866	83,354
Illinois	3,826,352	4,821,550	5,638,591	6,485,280	56,043
Indiana	2,192,404	2,516,462	2,700,876	2,930,390	36,045
Iowa	1,912,297	2,231,853	2,224,771	2,404,021	55,586
Kansas	1,428,108	1,470,495	1,690,949	1,769,257	81,774
Kentucky	1,858,635	2,147,174	2,289,905	2,416,630	40,181
Louisiana	1,118,588	1,381,625	1,656,388	1,798,509	45,409
Maine	661,086	694,466	742,371	768,014	29,895
Maryland	1,042,390	1,188,044	1,295,346	1,449,661	9,941
Massachusetts	2,238,947	2,805,346	3,366,416	3,852,356	8,039
Michigan	2,093,890	2,420,982	2,810,173	3,668,412	57,480
Minnesota	1,310,283	1,751,394	2,075,708	2,387,125	80,858
Mississippi	1,289,600	1,551,270	1,797,114	1,790,618	46,362
Missouri	2,679,185	3,106,665	3,293,335	3,404,055	68,727
Montana	142,924	243,329	376,053	548,889	146,201
Nebraska	1,062,656	1,066,300	1,192,214	1,296,372	76,808
Nevada	47,355	42,335	81,875	77,407	109,821
New Hampshire	376,530	411,588	430,572	443,083	9,031
New Jersey	1,444,933	1,883,669	2,537,167	3,155,900	7,514
New Mexico	160,282	195,310	327,301	360,350	122,503
New York	6,003,174	7,268,894	9,113,614	10,385,227	47,654
North Carolina	1,617,949	1,893,810	2,206,287	2,559,123	48,740
North Dakota	190,983	319,146	577,056	646,872	70,183
Ohio	3,672,329	4,157,545	4,767,121	5,759,394	40,470
Oklahoma	258,657	790,391	1,657,155	2,028,283	69,414
Oregon	317,704	413,536	672,765	783,389	95,607
Pennsylvania	5,258,113	6,302,115	7,665,111	8,720,017	44,832
Rhode Island	345,506	428,556	542,610	604,397	1,067
South Carolina	1,151,149	1,340,316	1,515,400	1,683,724	30,495
South Dakota	348,600	401,570	583,888	636,547	76,868
Tennessee	1,767,518	2,020,616	2,184,789	2,337,885	41,687
Texas	2,235,527	3,048,710	3,896,542	4,663,228	262,398
Utah	210,779	276,749	373,351	449,396	82,184
Vermont	332,422	343,641	355,956	352,428	9,124
Virginia	1,655,980	1,854,184	2,061,612	2,309,187	40,262
Washington	357,232	518,103	1,141,990	1,356,621	66,836
West Virginia	762,794	958,800	1,221,119	1,463,701	24,022
Wisconsin	1,693,330	2,069,042	2,333,860	2,632,067	55,256
Wyoming	62,555	92,531	145,965	194,402	97,594
Total	62,947,714	75,994,575	91,972,266	105,710,620	2,973,890

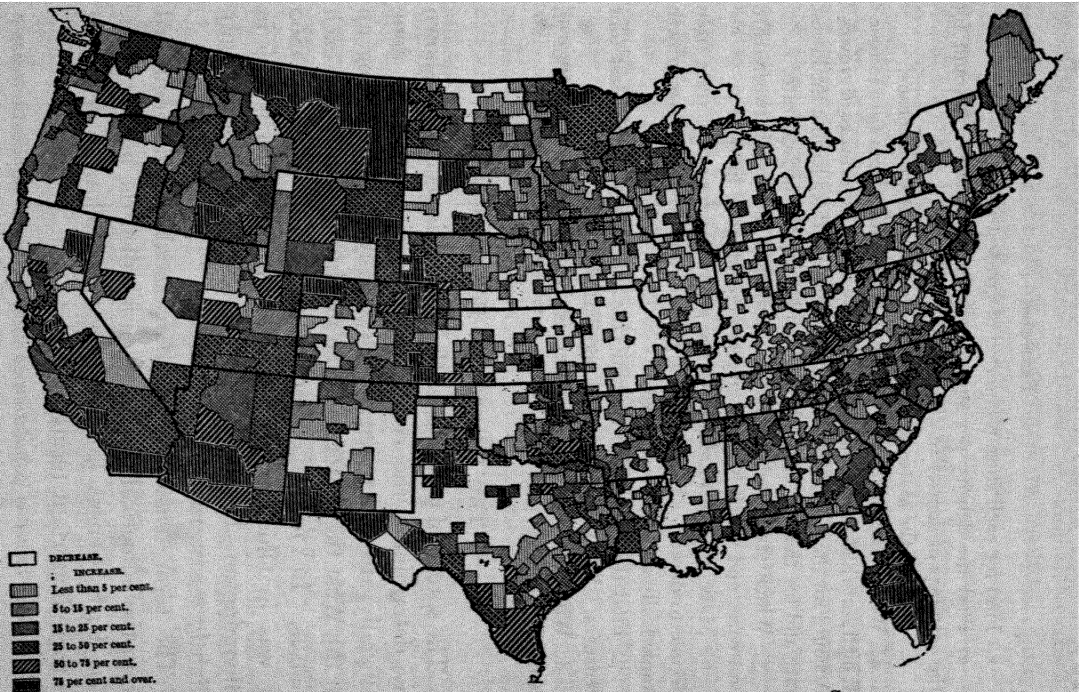


FIGURE 2. — PERCENTAGE OF INCREASE OR DECREASE IN TOTAL POPULATION, BY COUNTIES: 1910–1920

Examples

1. Find for each state the period of greatest growth.
2. Find the density per square mile in each state. Account for the extremes of density in different states.
3. Arrange the states in order of population at each census.
4. What is the percentage of growth in each state from 1910 to 1920? Which state had the highest and which the lowest percentage of growth? Account for the slow increase of the half dozen states having the lowest rate and for the rate of the half dozen having the highest rate.
5. Which state had the largest numerical increase between 1910 and 1920, and which had the largest percentage of increase?
6. Make a careful analysis of the growth of your own state from decade to decade. When was its greatest and when its least growth numerically and by percentages?
7. Find the population of your city and county for the last four censuses. What is the trend of population in each?
8. What are the causes for increase or decrease of population in your city, county, and state?

The Center of Population

The spread of people over the country is accurately shown by determining the center of population. This is done officially after each census. Naturally with the filling up of the West the center has been moving westward with each census. In 1790 the center was east of Baltimore; in 1860 it was in Ohio, south of Chillicothe; in 1910 it was in Bloomington, Indiana; and in 1920 it had moved only slightly westward from that city.

The term *center of population* should be distinguished from the numerical center which is called the *median point.* The U. S. Census Bureau makes the following definition of these important terms:

The term *center of population* as used in census publications has a somewhat technical significance, different from that frequently attached to it. The center is often understood to be the point of inter-

section of a north and south line which divides the population equally, with an east and west line which likewise divides it equally. This point of intersection is, in a certain sense, a center of population; it is here, however, designated the *median point* to distinguish it from the point technically defined as the center.

The center of population may be said to represent the center of gravity of the population. If the surface of the United States be considered as a rigid level plane without weight, capable of sustaining the population distributed thereon, individuals being assumed to be of equal weight and the plane to be supported, as on a pivotal point, at its center of gravity, the influence of each individual in maintaining the equilibrium of the plane would be directly proportional to his distance from the pivotal point or center of gravity. This is the point referred to by the term *center of population*. The median point, on the other hand, is in no sense a center of gravity but may be described as the numerical center of population. In determining the median point, distance is not taken into account, and the location of the units of population is considered only in relation to the intersecting median lines — as being north or south of the median parallel and east or west of the median meridian. Extensive changes in the geographic distribution of the population may take place without affecting the median point, whereas the center of population responds to the slightest population change in any section of the country. To illustrate, since the median point lies east of Minnesota, a million persons could move from Minnesota to Oregon without affecting the median point, while the removal of 500 persons from one town in Indiana to another, across the north and south line passing through the median point, would change the location of the point. On the other hand, the removal of a million persons from Minnesota to Oregon would have a very considerable effect on the center of population, since, in terms of the above analogy, the influence of each individual in maintaining the equilibrium of the plane would increase in proportion to his distance from the center of gravity. If all the people in the United States were to be assembled at one place, the center of population would be the point which they could reach with the minimum aggregate travel, assuming that they all traveled in direct lines from their residences to the meeting place. This would not be true of the median point.

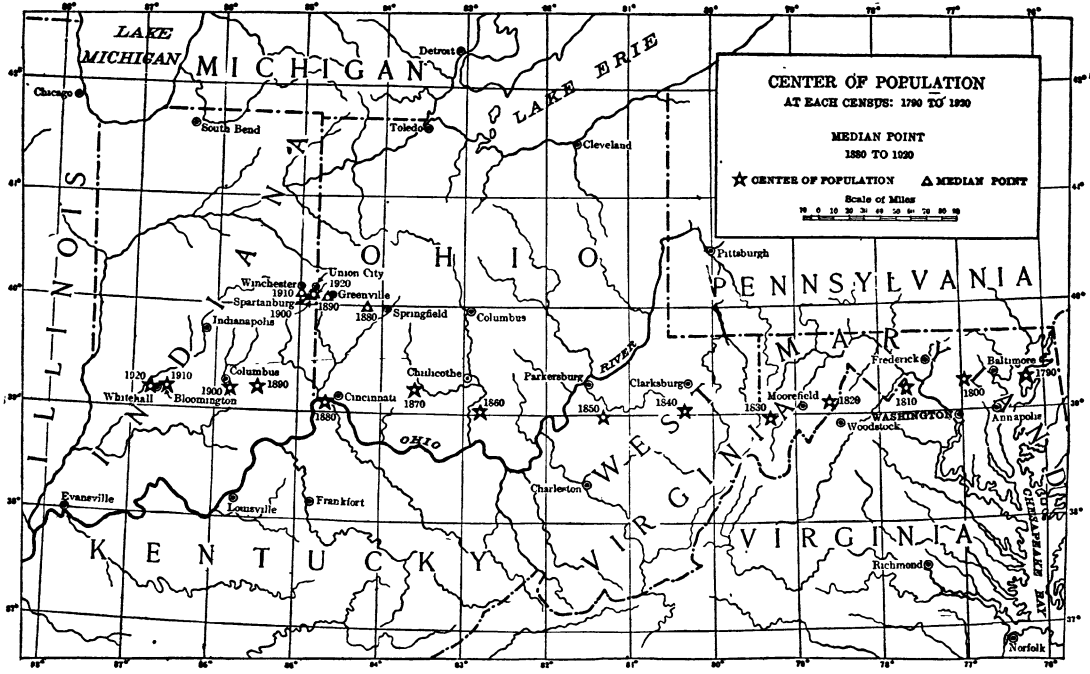

CENTER OF POPULATION
AT EACH CENSUS: 1790 TO 1920
MEDIAN POINT
1880 TO 1920
CENTER OF POPULATION
MEDIAN POINT
Scale of Miles
LAKE MICHIGAN
MICHIGAN
LAKE ERIE
ILLINOIS
INDIANA
OHIO
PENNSYLVANIA
WEST VIRGINIA
VIRGINIA
KENTUCKY
MARYLAND
DELAWARE
Detroit
Chicago
South Bend
Toledo
Cleveland
Pittsburgh
Union City
1920
Winchester
1910
Greenville
1890
Spartanburg
1900
Springfield
1880
Columbus
Indianapolis
1920
1910
Columbus
1890
Whitehall
1900
Bloomington
Cincinnati
1870
1880
Chillicothe
1860
Parkersburg
1850
Clarksburg
1840
Moorefield
1830
1829
Frederick
1810
Baltimore
1790
1800
WASHINGTON
Woodstock
Annapolis
OHIO
Charleston
Evansville
Louisville
Frankfort
Richmond
Norfolk

FIGURE 3

Center of population might be found for the negroes, the foreign-born, and other groups. The Census Bureau has determined the center of foreign-born white population to be in Allen County near Ft. Wayne, Indiana. The shifting of negroes to the North has tended to move the center of negro population northward.

Estimating the Population

It is desired for different purposes that an estimate of the population be made from time to time. Since the census is taken only once in ten years, the figures are out of date long before a new one is taken. The method used in estimating the increase in population is a simple one. It consists in finding the average annual increase between the last two censuses and multiplying by the number of years to the date desired. Thus if the average increase were 100,000 a year between 1910 and 1920, the total from 1920 to 1923 at the same rate would be 300,000. If the periods of time are not in exact years, then the monthly rate is found and multiplied by the number of months intervening.

The Census of 1910 and that of 1920 were taken in different months so that exactly ten years did not intervene, but rather nine years and nine months, which equals one hundred seventeen months or nine and three-fourth years. The total increase between April, 1910 and January, 1920 was 13,738,354, or at a monthly rate of increase of 117,422 and a yearly rate of 1,308,069.

The estimate cannot, of course, be an exact one, because new conditions often arise. For example, immigration, which had been very heavy prior to 1914, was almost entirely shut off by the war and since 1922 has been

somewhat narrowly restricted. Care should be taken in estimating the growth of certain cities that have sprung up suddenly on account of some new and rapidly expanding industry, such as Gary, Indiana; Akron, Ohio; and Tulsa, Oklahoma. The rapid growth shown in one decade would not be likely to be continued thereafter at the same rate. Annexation of new territory to a city will also disturb all calculations of increase and must be taken into account in all estimates.

Another method of estimating population of the country as a whole is to find the excess of births over deaths and of immigrants over emigrants and add the result to the census figures. Thus the birth rate in 1920 was 23.7 per thousand and the death rate was 13.1 per thousand, and the increase in population was 10.6 per thousand or 1,120,532. The number of immigrants exceeded the emigrants in 1920 by about 141,000. The population in 1921 was therefore approximately 106,972,152. This method would not give correct results in estimating the growth of a city or a state, for we have no means of knowing how many people migrate into and out of the city or the state annually.

Examples

1. Why are estimates of population needed?

2. Estimate the population of the United States and of your state and city at this date on the basis of increases shown between 1910 and 1920.

3. The health departments of the state and of the cities make regular estimates of the population of their respective states and cities. Secure the latest estimates for our state and city.

4. The U. S. Census Bureau makes regular estimates of population of the whole country and of states and cities. Secure the latest estimates.

Population by Ages

The distribution of the population according to age shows that the proportion of children and young people is decreasing slightly while that of persons over 45 is increasing. The increase in the population living beyond 65 is quite marked, and the increased proportion of women beyond 65 is especially noteworthy. Several causes account for the changed proportions. The birth rate has slightly decreased, thus accounting partly for the decrease in children. At the same time the improved health conditions of the last twenty years have greatly increased the proportion of children reaching the adult groups, thus correspondingly helping to reduce the percentage under 25.

Table 3. — Population by Age Periods: 1900–1920

Age period	Population			
	1920	1910	1900	1890
All ages, number .	105,710,620	91,972,266	75,994,575	62,622,250
Under 5 years . . .	11,573,230	10,631,364	9,170,628	7,634,693
5 to 14 years . . .	22,039,212	18,867,772	16,954,357	14,607,507
15 to 24 years . . .	18,707,577	18,120,587	14,891,105	12,754,239
25 to 44 years . . .	31,278,522	26,809,875	21,297,427	16,858,086
45 to 64 years . . .	17,030,165	13,424,089	10,399,976	8,188,272
65 years and over .	4,933,215	3,949,524	3,080,498	2,417,288
Age unknown . . .	148,699	169,055	200,584	162,165

Examples

1. What percentage of the population was in each age group in each census year since 1890?
2. What is the trend in percentages in each group since 1890?

The distribution of the population in small groups by age and sex is shown next. This brings out the difference in the number of males and females in each age group.

TABLE 4. — DISTRIBUTION BY AGE PERIODS FOR EACH SEX: 1920–1910

AGE PERIOD	MALE		FEMALE	
	1920	1910	1920	1910
	Number	Number	Number	Number
Total	53,900,431	47,332,277	51,810,189	44,639,989
Under 5	5,857,461	5,380,596	5,715,769	5,250,768
Under 1	1,141,939	1,123,409	1,115,316	1,093,933
5 to 9	5,753,001	4,924,123	5,645,074	4,836,509
10 to 14	5,369,306	4,601,753	5,271,831	4,505,387
15 to 19	4,673,792	4,527,282	4,756,764	4,536,321
20 to 24	4,527,045	4,580,290	4,749,976	4,476,694
25 to 29	4,538,233	4,244,348	4,548,258	3,935,655
30 to 34	4,130,783	3,656,768	3,940,410	3,315,417
35 to 39	4,074,361	3,367,016	3,700,920	3,029,084
40 to 44	3,285,543	2,786,350	3,060,014	2,475,237
45 to 49	3,117,550	2,378,916	2,646,070	2,090,281
50 to 54	2,535,545	2,110,013	2,199,328	1,790,778
55 to 59	1,880,065	1,488,437	1,669,059	1,298,514
60 to 64	1,581,800	1,185,966	1,400,748	1,081,184
65 to 69	1,079,817	863,994	988,658	815,509
70 to 74	706,301	561,644	688,735	552,084
75 to 79	419,965	331,280	436,595	336,022
80 to 84	185,903	153,745	216,876	168,009
85 to 89	69,272	56,335	87,267	66,483
90 to 94	16,383	14,553	23,597	18,920
95 to 99	3,869	3,045	5,710	4,346
100 and over	1,561	1,380	2,706	2,175
Age unknown	92,875	114,443	55,824	54,612

Examples

1. Find the percentage of males in the total population in each age group.

2. Find the percentage of females in the total population in each age group.

3. How does the number of males compare with that of females in each age group?

4. In what age group do males predominate?

5. In what age group do females predominate?

6. Compare the percentage of males and of females in each age group in 1920 with the same groups in 1910.

TABLE 5. — UNITED STATES POPULATION OF MILITARY AGE (18 TO 44 YEARS): 1920

STATE	MALES	FEMALES	STATE	MALES	FEMALES	STATE	MALES	FEMALES
Alabama	423,075	468,559	Maine	148,430	147,501	Oklahoma	414,772	393,626
Arizona	84,965	66,240	Maryland	309,676	307,313	Oregon	179,038	161,054
Arkansas	330,492	342,023	Massachusetts	807,838	851,264	Pennsylvania	1,853,104	1,777,532
California	829,998	734,965	Michigan	854,578	738,522	Rhode Island	126,465	131,333
Colorado	206,979	190,616	Minnesota	526,532	485,140	South Carolina	306,292	334,837
Connecticut	299,902	293,609	Mississippi	327,251	360,345	South Dakota	140,030	123,268
Delaware	48,236	45,809	Missouri	706,038	718,234	Tennessee	438,225	473,299
District of Columbia	102,670	125,147	Montana	132,569	108,708	Texas	995,938	955,294
Florida	197,886	202,492	Nebraska	279,150	262,313	Utah	92,645	85,337
Georgia	542,136	589,643	Nevada	22,256	14,297	Vermont	66,736	65,970
Idaho	95,705	80,611	New Hampshire	86,923	87,608	Virginia	454,990	457,603
Illinois	1,449,872	1,405,936	New Jersey	697,019	684,123	Washington	329,067	278,208
Indiana	602,798	594,839	New Mexico	76,548	67,225	West Virginia	305,695	275,802
Iowa	501,040	488,301	New York	2,313,807	2,343,865	Wisconsin	556,518	523,456
Kansas	365,403	354,153	North Carolina	456,568	491,837	Wyoming	54,037	38,429
Kentucky	469,119	470,032	North Dakota	133,575	119,733			
Louisiana	362,226	375,697	Ohio	1,296,399	1,203,564	United States	22,401,211	21,895,312

7. What do the figures indicate about the increase in length of life?

8. Find the ages of the people in your own state, city, and county and compare the percentages in each age group with the whole.

Man Power

The man power of the country for war work is given in the table of population from 18 to 44 years, the age for military service.

Examples

1. What percentage of the total male population of the country is between 18 and 44? Of the total female population?

2. Find the percentage of the total population of military age in each state. Which state has the largest percentage? The smallest?

Population by Sex

The population was made up in 1920 of 53,900,431 males and 51,810,189 females, or 104 males for every 100 females. This difference has been quite uniform for a hundred years, as is disclosed by the next table.

Table 6. — Distribution of Population of the United States by Sex

YEAR	MALE	FEMALE	YEAR	MALE	FEMALE
1920	53,900,431	51,810,189	1860	16,085,204	15,358,117
1910	47,332,277	44,639,989	1850	11,837,660	11,354,216
1900	38,816,448	37,178,127	1840	8,688,532	8,380,921
1890	32,237,101	30,710,613	1830	6,532,489	6,333,531
1880	25,518,820	24,636,963	1820	4,896,605	4,741,848
1870	19,493,565	19,064,806			

The constant preponderance in number of males over females is due partly to the larger birth rate of males and

partly to the steady flow of immigration. Men come first to seek work or a new home and later bring their wives and children. This latter fact undoubtedly accounts for the large excess of males in 1910.

Examples

1. How many males were there for each 100 females at each census?

2. What was the probable cause of the larger proportion of males at the Census of 1890? 1900?

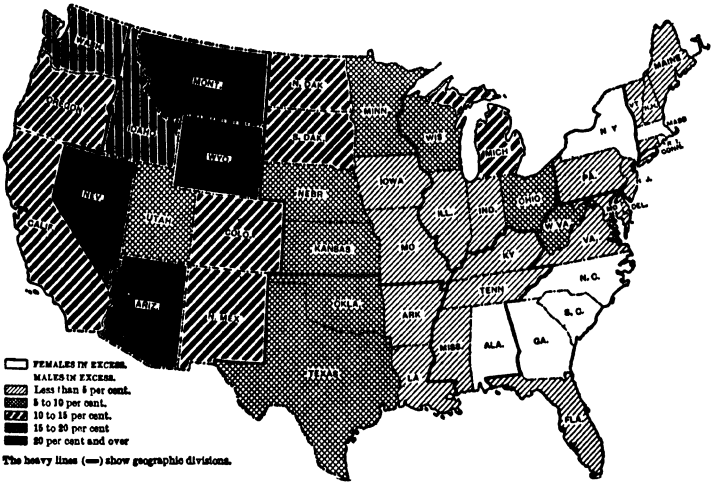


FIGURE 4. — RATIO OF MALES TO FEMALES IN TOTAL POPULATION, BY STATES: 1920

The same figures are not true for all states. In some there is a still greater preponderance of males, while in others the females outnumber the males. The marked differences in different states may be explained on the basis of occupations. Thus in the New England states the textile mills and other occupations suitable for females

TABLE 7. — POPULATION OF THE STATES BY SEX: 1920

STATES	POPULATION	
	Male	Female
Maine	388,752	379,262
New Hampshire	222,111	220,972
Vermont	178,851	173,577
Massachusetts	1,889,998	1,962,358
Rhode Island	297,524	306,873
Connecticut	695,335	685,296
New York	5,187,324	5,197,903
New Jersey	1,590,078	1,565,822
Pennsylvania	4,429,019	4,290,998
Ohio	2,995,977	2,803,417
Indiana	1,489,074	1,441,316
Illinois	3,304,830	3,180,450
Michigan	1,928,436	1,739,976
Wisconsin	1,356,719	1,275,348
Minnesota	1,245,529	1,141,596
Iowa	1,229,392	1,174,629
Missouri	1,723,319	1,680,736
North Dakota	341,673	305,199
South Dakota	337,120	299,427
Nebraska	672,805	623,567
Kansas	909,221	860,036
Delaware	113,755	109,248
Maryland	729,455	720,206
District of Columbia	203,543	234,028
Virginia	1,168,494	1,140,693
West Virginia	763,098	700,603
North Carolina	1,279,062	1,280,061
South Carolina	838,293	845,431
Georgia	1,444,823	1,451,009
Florida	495,320	473,150
Kentucky	1,227,494	1,189,136
Tennessee	1,173,967	1,163,918
Alabama	1,173,105	1,175,069
Mississippi	897,124	893,494
Arkansas	895,228	856,976
Louisiana	903,335	895,174
Oklahoma	1,058,044	970,239
Texas	2,409,224	2,254,004
Montana	299,941	248,948
Idaho	233,919	197,947
Wyoming	110,359	84,043
Colorado	492,731	446,898
New Mexico	190,456	169,894
Arizona	183,602	150,560
Utah	232,051	217,345
Nevada	46,240	31,167
Washington	734,701	621,920
Oregon	416,334	367,055
California	1,813,591	1,613,270

draw heavily upon the women from among the immigrants, while in the mining, grazing, and lumbering states occupations distinctly for men predominate.

Examples

1. Find the number of males to each 100 females in each state.
2. Account for some of the marked differences in different states.
3. Add the totals for each geographic division and find the number of males for each 100 females in each division.
4. Find the number of each sex in your own city, county, and state.

Marital Condition

The total number of people in the United States over 15 years of age in 1920 was 72,698,178, of whom 36,920,663 were males and 35,177,515 were females. The marital condition of these people is shown in the next table along with similar information for the census years since 1890.

Table 8. — Marital Condition of Population over Fifteen Years of Age: 1890–1920

Census Year	Total	Males			
		Single	Married	Widowed	Divorced
1920	36,920,663	12,967,565	21,849,266	1,758,308	235,284
1910	32,425,805	12,550,129	18,092,600	1,471,390	156,162
1900	25,620,399	10,297,940	13,955,650	1,177,976	84,230
1890	20,777,872	8,655,711	11,205,205	815,437	49,100
		Females			
		Single	Married	Widowed	Divorced
1920	35,177,515	9,616,902	21,318,933	3,917,625	273,304
1910	30,047,325	8,933,170	17,684,687	3,176,228	185,068
1900	24,249,191	7,566,530	13,810,057	2,717,715	114,647
1890	19,602,178	6,233,316	11,124,785	2,154,598	71,883

Some of the facts disclosed by this table are: the percentage of the people who are married has increased; the number of single men is far greater than the number of single women; the number of widowed females is far in excess of widowed males; the number and proportion of divorced people has increased considerably. Since this table shows the basic facts of family life, it is one for intensive study.

Examples

1. What percentage of the total male population was single? Married? Widowed? Divorced?
2. What percentage of the total female population was single? Married? Widowed? Divorced?
3. Account for the greater number of females who had been widowed than that of males.
4. What was the trend between 1890 and 1920 in the number reported as divorced?
5. What percentage of the total number married was the number divorced?
6. From the *Abstract of the Fourteenth Census* work out a table for your own state and city similar to the above.

Population by Race

The population of the United States at each census since 1900 was made up as follows with respect to color.

Table 9. — Composition by Race of the Population of the United States: 1900–1920

Class of population	1920	1910	1900
Total population	105,710,620	91,972,266	75,994,575
White	94,820,915	81,731,957	66,809,196
Negro	10,463,131	9,827,763	8,833,994
Indian	244,437	265,683	237,196
Chinese	61,639	71,531	89,863
Japanese	111,010	72,157	24,326
All other	9,488	3,175	

Examples

1. What percentage of the total population was in each group at each census?

2. What was the percentage of increase or decrease in each decade from 1900 to 1920?

3. Account for the trends in each case.

4. What factors of increase found among the white population are not found among the others?

5. Since the increase of negroes was entirely from the excess of births over deaths, what was the average annual excess?

6. What was the average increase of negroes for each year from 1900 to 1910 and from 1910 to 1920? Estimate the negro population at this time.

The white population was divided with respect to native or foreign birth and parentage as follows:

TABLE 10. — WHITE POPULATION BY NATIVITY: 1900–1920

CLASS OF POPULATION	1920	1910	1900
Native white	81,108,161	68,386,412	56,595,389
Native parentage	58,421,957	49,488,575	40,949,362
Foreign parentage	15,694,539	12,916,311	10,632,280
Mixed parentage (One parent born abroad)	6,991,665	5,981,526	5,013,737
Foreign-born	13,712,754	13,345,545	10,213,817

Examples

1. What percentage of the total population in each census year 1900–1920 was native-born? Foreign-born? What percentage was of native parentage? Of foreign parentage? Of mixed parentage?

2. Which group had the largest percentage of increase from 1900 to 1920?

3. In which census years was the largest percentage of each group?

4. Compile the data as in the above questions for your own state and city from the *Abstract of the Fourteenth Census*, or from the complete volumes of the Census of 1920.

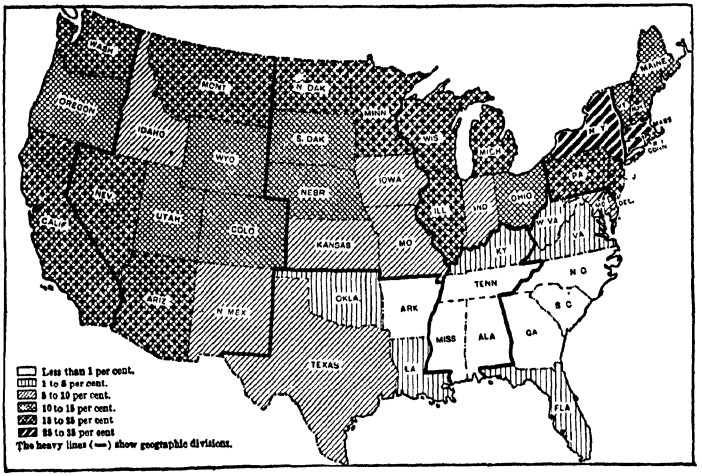


FIGURE 5. — PERCENTAGE OF FOREIGN-BORN WHITE IN TOTAL POPULATION, BY STATES: 1920

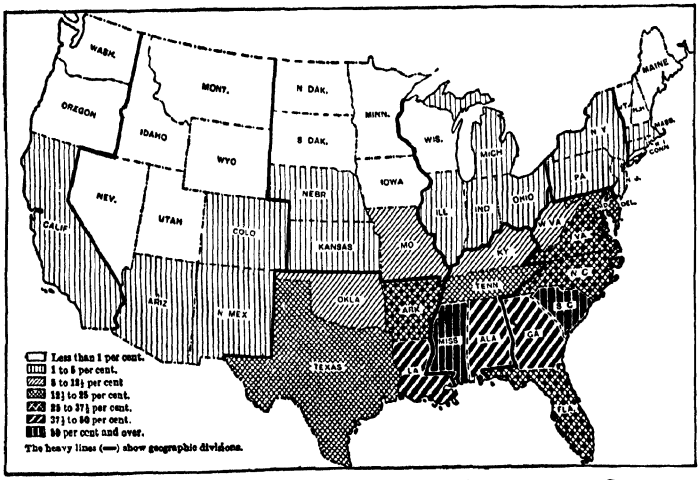


FIGURE 6. — PERCENTAGE OF NEGROES IN TOTAL POPULATION, BY STATES: 1920

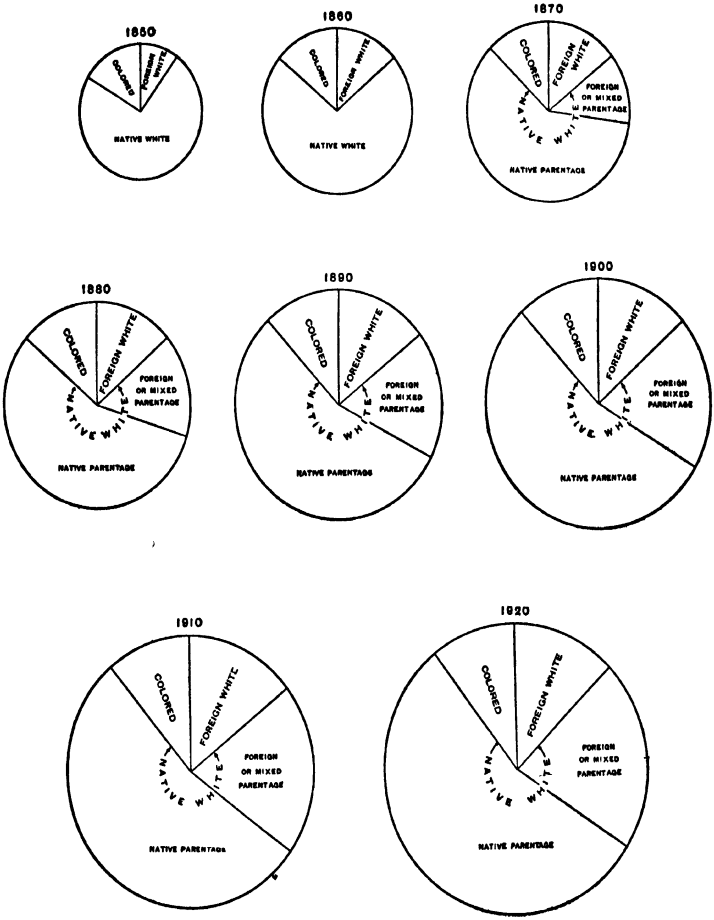


FIGURE 7.—TOTAL POPULATION AND DISTRIBUTION BY CLASSES: 1850–1920

Families and Dwellings

The federal census counts the number of families and also the number of dwellings in the country. In doing so the census uses the term *family* to signify a group of persons, whether related by blood or not, who live together as one household, usually sharing the same table. One person living alone is counted as a family, and, on the other hand, all the occupants and employees of a hotel, boarding house, or lodging house, if that is their usual place of abode, and all the inmates of an institution, however numerous, are treated as constituting a single family. Thus the census family may be either a *private* family or an *economic* family. The economic family, of course, is likely to be much larger than the private family. Moreover, the private family is not necessarily identical with the natural family, since many private families include servants, boarders, or other members not related by blood, or members of more or less distant blood relationship. The natural family commonly comprises husband, wife, and children. The members of a natural family, however, in many cases do not live together in the same private family. In particular, the older sons and daughters are likely to be members of other households, perhaps in other parts of the country.

The census defines a *dwelling* as a place in which one or more persons regularly sleep. It need not be a house in the usual sense of the word, but may be a hotel, boarding house, institution, or the like. A boat, a tent, a freight car, or a room in a factory, store, or office building, although occupied by only one person, is also counted as a dwelling, while, on the other hand, an entire apartment house, although containing many families, constitutes but one dwelling.

It will be seen that the terms are not used as we generally use them to mean a house and a natural family, but it is believed that the number of families thus reported and the number of dwellings fairly represent the natural home and family.

TABLE 11. — DWELLINGS AND FAMILIES IN THE UNITED STATES

CENSUS YEAR	DWELLINGS	FAMILIES
1920	20,697,204	24,351,676
1910	17,805,845	20,255,555
1900	14,430,145	16,187,715
1890	11,483,318	12,690,152
1880	8,955,812	9,945,916

Examples

1. Find the number of people to each dwelling and family at each census.
2. Determine the trend in each case from 1880 to 1920.

The number of dwellings and families distributed by urban and rural communities and by geographic division is shown in the next table. It shows a marked difference between urban and rural communities, the number of persons to a dwelling being 5.7 in the cities and 4.6 in the rural districts. The number of persons to a family was 4.2 in cities and 4.5 in rural communities.

From the census we learn that some of the leading cities have a large number of persons to a dwelling. New York had 15.4 to a private dwelling, Boston, 9.4, and Chicago, 8.0. Some cities have a smaller number of persons per dwelling than others, notably Los Angeles with 4.6 persons per dwelling. These differences are accounted for by the

character of dwellings. In the sections of Manhattan many people are often crowded together in single tenements, while in Los Angeles there are few tenements and people live mostly in homes. It will be seen that great care must be exercised in drawing conclusions concerning different cities.

TABLE 12. — DWELLINGS AND FAMILIES FOR URBAN AND RURAL COMMUNITIES: 1920; NUMBER OF PERSONS TO A DWELLING AND TO A FAMILY BY DIVISIONS: 1920 AND 1910

DIVISION AND CLASS OF COMMUNITY	POPULATION 1920	DWELLINGS 1920	FAMILIES 1920	PERSONS TO A DWELLING		PERSONS TO A FAMILY	
				1920	1910	1920	1910
United States:							
Urban	**54,304,603**	**9,484,550**	**12,803,047**	**5 7**	**5 9**	**4.2**	**4 5**
Rural	**51,406,017**	**11,212,654**	**11,548,629**	**4 6**	**4.7**	**4.5**	**4.6**
GEOGRAPHIC DIVISIONS							
NEW ENGLAND:							
Urban	5,865,073	903,949	1,325,076				
Rural	1,535,836	352,015	378,736				
MIDDLE ATLANTIC:							
Urban	16,672,595	2,332,383	3,788,850				
Rural	5,588,549	1,234,166	1,296,230				
EAST NORTH CENTRAL:							
Urban	13,049,272	2,406,316	3,119,157				
Rural	8,426,271	1,979,225	2,024,756				
WEST NORTH CENTRAL:							
Urban	4,727,372	959,775	1,164,089				
Rural	7,816,877	1,757,193	1,793,760				
SOUTH ATLANTIC:							
Urban	4,338,792	846,647	1,006,440				
Rural	9,651,480	1,935,037	1,985,188				
EAST SOUTH CENTRAL							
Urban	1,994,207	422,751	496,765				
Rural	6,899,100	1,444,416	1,480,616				
WEST SOUTH CENTRAL:							
Urban	2,970,829	606,625	695,135				
Rural	7,271,395	1,504,254	1,547,675				
MOUNTAIN:							
Urban	1,214,980	254,491	295,327				
Rural	2,121,121	489,284	508,526				
PACIFIC:							
Urban	3,471,483	751,613	912,208				
Rural	2,095,388	517,064	533,142				

Examples

1. Find the number of persons per dwelling and per family in each of the geographic divisions and in the rural and urban communities.

2. Account for the differences in cities and geographic divisions.

3. From the *Abstract of the Fourteenth Census* find the number of dwellings and families in your own state and city and in neighboring states and in cities of the same class.

Sources for Research

1. The *Abstract of the Fourteenth Census* is the most essential volume for the study of this chapter. It gives in detail the materials which are sketched here and enables the student to find the facts concerning his own city, county, and state.

2. The *Statistical Abstract of the United States*, published by the U. S. Department of Commerce, summarizes in concise tables much of the data needed for further research.

3. The New York *World Almanac* and the Chicago *Daily News Almanac* give briefly and concisely the main facts covered by this chapter.

4. The volumes of the *Fourteenth Census of the United States* give in still greater detail the facts about our population. The student should learn to use them. Volumes I and II on population are the ones to be consulted on this chapter.

CHAPTER III

THE MIGRATION OF PEOPLE

The migration of people has been the most profound social fact in all history. Our first glimpse of the dawn of civilization discloses nomad races moving from place to place, without permanent abode; next we see these races settling down to a semi-permanent home in the places which they overran. The Roman Empire was disrupted by the great hordes of immigrants who came in compact masses, took possession, and finally settled. People do not now migrate in whole tribes with their chieftains, but they move singly in vast numbers from one community or country to another, seeking work or a new home. Many millions of Italians have left Italy for other countries in the last thirty years. Ireland, Germany, the Scandinavian countries, and Central Europe have sent millions of their sons to many lands. Americans, too, have migrated in large numbers. A total of 1,447,467 Americans emigrated to Canada between 1899 and 1923. Over 5,000,000 people migrated to the Argentine Republic, mostly Spaniards and Italians, in the last sixty-five years. Many immigrants have returned to their native countries, but millions have settled permanently and reared their families elsewhere. From 1820 to 1923 a total of 35,292,506 and from 1870 to 1923 a total of 26,821,630 immigrants have been admitted into the United States.

Alien Immigration to the United States

The results of immigration to the United States as disclosed by the photograph of the census are shown in the tables which follow. In them the immigration is

Table 13. — Alien Immigration to the United States: 1820–1923

YEAR	NUMBER	YEAR	NUMBER	YEAR	NUMBER	YEAR	NUMBER
1820	8,385	1851	379,466	1881	669,431	1911	878,587
1821	9,127	1852	371,603	1882	788,992	1912	838,172
1822	6,911	1853	368,645	1883	603,322	1913	1,197,892
1823	6,354	1854	427,833	1884	518,592	1914	1,218,480
1824	7,912	1855	200,877	1885	395,346	1915	326,700
1825	10,199	1856	200,436	1886	334,203	1916	298,826
1826	10,837	1857	251,306	1887	490,109	1917	295,403
1827	18,875	1858	123,126	1888	546,889	1918	110,618
1828	27,382	1859	121,282	1889	444,427	1919	141,132
1829	22,352	1860	153,640	1890	455,302	1920	430,001
1830	23,220	1861	91,918	1891	560,319	1921	805,228
1831	22,633	1862	91,985	1892	579,663	1922	309,556
1832	60,482	1863	176,282	1893	439,730	1923	522,919
1833	58,640	1864	193,418	1894	285,631	Total	35,292,506
1834	65,365	1865	248,120	1895	258,536	1924	
1835	45,374	1866	318,568	1896	343,267	1925	
1836	76,242	1867	315,722	1897	230,832	1926	
1837	79,340	1868	138,840	1898	229,299	1927	
1838	38,914	1869	352,768	1899	311,715		
1839	68,069	1870	387,203	1900	448,572		
1840	84,066	1871	321,350	1901	487,918		
1841	80,289	1872	404,806	1902	648,743		
1842	104,565	1873	459,803	1903	857,046		
1843	52,496	1874	313,339	1904	812,870		
1844	78,615	1875	227,498	1905	1,026,499		
1845	114,371	1876	169,986	1906	1,100,735		
1846	154,416	1877	141,857	1907	1,285,349		
1847	234,968	1878	138,469	1908	782,870		
1848	226,527	1879	177,826	1909	751,786		
1849	297,024	1880	457,257	1910	1,041,570		
1850	369,980						

FOREIGN WHITE STOCK BY PRINCIPAL COUNTRIES OF ORIGIN: 1920

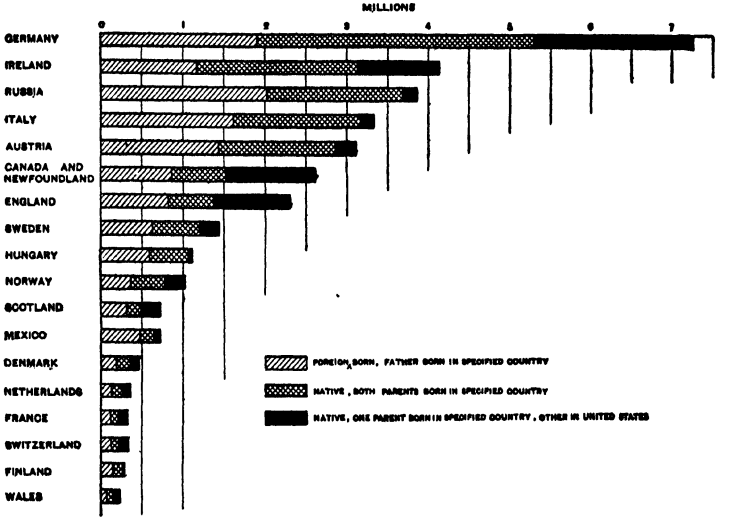


FIGURE 8

FOREIGN WHITE STOCK BY PRINCIPAL COUNTRIES OF ORIGIN: 1910

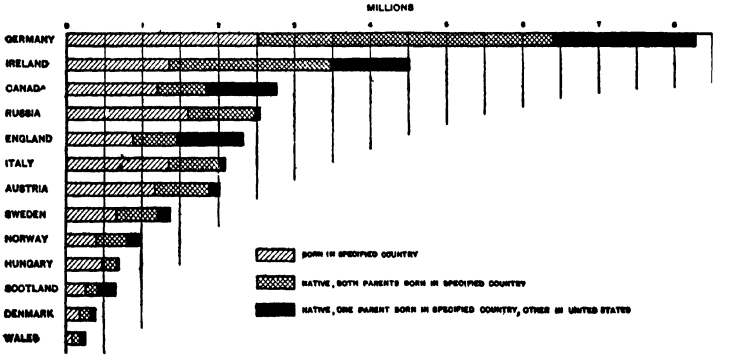


FIGURE 9

shown since 1820; the composition of the immigrant body since 1890; the countries from which our immigrant population has come; and the recent tendencies in immigration.

Examples

1. During which years was the greatest numerical immigration? During which decades?

2. Compare the number of immigrants at each census year with the total population and find the number of new immigrants that year to each thousand of the population.

3. In what year was the immigration greatest in proportion to population?

4. Explain the wide fluctuations in the number of immigrants in different years.

5. Arrange the countries in the order of number of immigrants.

Throughout the last century and down to 1916 there was almost unrestricted immigration from Europe into this country. We set up barriers against the Chinese in 1882, and later by treaty excluded the Japanese. We have also restricted those who were criminal or who might become dependents. In 1916 the literacy test law was passed, which required that immigrants be able to read and write in some language. In 1922 the first real restrictive act was passed, limiting the number of immigrants from each country to 3 per cent of the people from that country residing here at the Census of 1910. In 1924 the percentage was reduced to 2 per cent of the immigrants residing here in 1890. The number to which the laws of 1922 and 1924 entitled each country is shown in the next two tables. There is no quota for the American countries in either table.

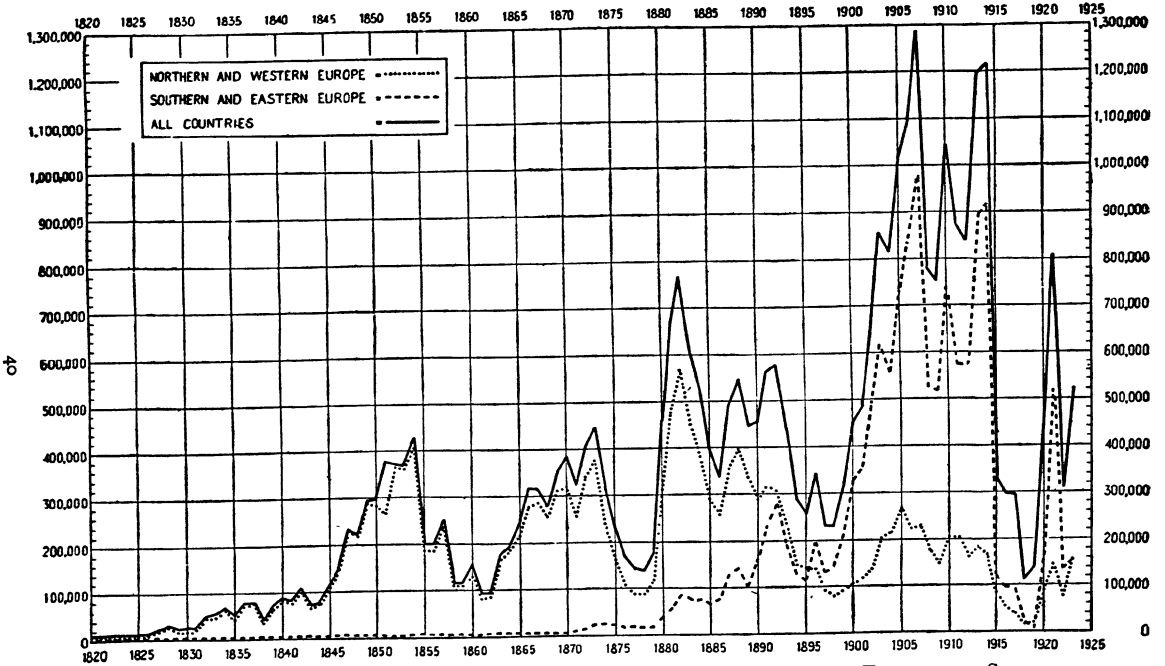


FIGURE 10. — IMMIGRATION TO THE UNITED STATES FROM NORTHERN AND WESTERN EUROPE AND SOUTHERN AND EASTERN EUROPE: 1920–1923

TABLE 14. — YEARLY QUOTAS UNDER RESTRICTION ACT, 1922 (EXTENDED TO JUNE 30, 1924)

COUNTRY OR REGION OF BIRTH	ANNUALLY	COUNTRY OR REGION OF BIRTH	ANNUALLY
Albania	288	Spain (incl. Canary Isl.)	912
Armenia (Russ.)	230	Sweden	20,042
Austria	7,451	Switzerland	3,752
Belgium	1,563	United Kingdom	77,342
Bulgaria	302	Jugoslavia	6,426
Czechoslovakia	14,357	Other Europe (incl. Andorra,	
Danzig, Free City of	301	Gibraltar, Liechtenstein,	
Denmark	5,619	Malta, Monaco and San	
Finland	3,921	Marino)	86
Fiume, Free State of	71	Palestine	57
France	5,729	Syria	928
Germany	67,607	Turkey (European and Asiatic; incl. Smyrna region	
Greece	3,294	and Turkish-Armenian	
Hungary	5,638	region)	2,388
Iceland	75	Other Asia (incl. Cyprus,	
Italy	42,057	Hejaz, Iraq (Mesopotamia),	
Luxemburg	92	Persia, Rhodes, and any	
Memel Region	150	other Asiatic territory not	
Netherlands	3,607	included in the Barred Zone.	
Norway	12,202	Persons born in Asiatic	
Poland	21,076	Russia are included in the	
Eastern Galicia	5,786	Russia quota)	81
Pinsk region	4,284	Africa	122
Portugal (incl. Azores and		Atlantic Islands (other than	
Madeira)	2,465	Azores, Canary Islands,	
Roumania	7,419	Madeira and islands adjacent to the American con-	
Bessarabian region	2,792	tinent)	121
Russia (European and Asiatic)	21,613	Australia	279
Esthonian region	1,348	New Zealand and Pacific	
Latvian region	1,540	Islands	80
Lithuanian region	2,310	Total	357,830

TABLE 15. — YEARLY QUOTAS UNDER 1924 UNITED STATES IMMIGRATION LAW

COUNTRY OR AREA OF BIRTH	ANNUAL QUOTA	COUNTRY OR AREA OF BIRTH	ANNUAL QUOTA	COUNTRY OR AREA OF BIRTH	ANNUAL QUOTA
Afghanistan	100	Iraq (Mesopotamia)	100	Portugal	503
Albania	100	Irish Free State	28,567	Ruanda and Urundi (Belgian mandate)	100
Andorra	100	Italy, incl Rhodes, Dodekanesia, and Castellorizzo	3,845	Roumania	603
Arabian peninsula	100	Japan	100	Russia, European and Asiatic	2,248
Armenia	124	Jugo-Slavia	671	Samoa, Western (proposed mandate of New Zealand)	100
Australia, including Papua, Tasmania, and all islands appertaining to Australia	121	Latvia	142	San Marino	100
Austria	785	Liberia	100	Siam	100
Belgium	512	Liechtenstein	100	South Africa, Union of	100
Bhutan	100	Lithuania	344	Southwest Africa (proposed mandate of Union of So Africa)	100
Bulgaria	100	Luxemburg	100	Spain	131
Cameroon (proposed British mandate)	100	Monaco	100	Sweden	9,561
Cameroon (French mandate)	100	Morocco (French and Spanish Zones and Tangier	100	Switzerland	2,081
China	100	Muscat (Oman)	100	Syria and The Lebanon (French mandate)	100
Czechoslovakia	3,073	Nauru (proposed British mandate)	100	Tanganyika (proposed British mandate)	100
Danzig, Free City of	228	Nepal	100	Togoland (proposed British mandate)	100
Denmark	2,789	Netherlands	1,648	Togoland (French mandate)	100
Egypt	100	New Zealand (incl appertaining islands)	100	Turkey	100
Esthonia	125	Norway	6,453	Yap and other Pacific islands (under Japanese mandate)	100
Ethiopia (Abyssinia)	100	New Guinea, and other Pacific islands under proposed Australian mandate	100	Total	164,667
Finland	471	Palestine (with Trans-Jordan, proposed British mandate)	100		
France	3,954	Persia	100		
Germany	51,227	Poland	5,982		
Great Britain and North Ireland	34,007				
Greece	100				
Hungary	473				
Iceland	100				
India	100				

Examples

1. What is the value of limiting the number of immigrants to a percentage of those of each nationality already here?

2. Should such a quota be based upon the last census instead of that of 1890?

3. What difference would be made if the quota were based upon other censuses, let us say 1900 or 1920?

4. Compare the quotas under the two restriction laws.

5. Secure the latest immigration law from the U. S. Bureau of Immigration.

Origin of Immigrants

Where do the more recent immigrants come from? This question is answered in the next tables.

Table 16. — Where Immigrants Have Come from to America: 1820–1922

Country	Number
United Kingdom	8,430,777
France	550,917
Netherlands	231,294
German Empire	5,568,702
Denmark	313,528
Norway	756,044
Sweden	1,149,950
Switzerland	274,345
Belgium	146,839
Other Northern and Western Europe	16,270
Italy	4,505,133
Spain	163,231
Portugal	246,250
Austria Hungary	4,199,527
Russia and Finland	3,332,259
Poland	320,257
Bulgaria, Serbia, and Montenegro	78,307
Greece	405,697
Roumania	133,479
Turkey in Europe	152,271
Turkey in Asia	201,786
British North America	2,209,403
Southern America	916,821
China	366,739
Japan	262,584
India	8,619
Others	357,365

TABLE 17. — IMMIGRANT ALIENS ADMITTED, BY RACE OR PEOPLE: 1913–1922, YEARS ENDED JUNE 30

[Source: Reports of the Commissioner General of Immigration, Department of Labor]

RACE OR PEOPLE	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
African (black) . .	6,634	8,447	5,660	4,576	7,971	5,706	5,823	8,174	9,873	5,248					
Armenian	9,353	7,785	932	964	1,221	221	282	2,762	10,212	2,249					
Bohemian, Moravian (Czech)	11,091	9,928	1,651	642	327	74	105	415	1,743	3,086					
Bulgarian, Serbian, Montenegrin . .	9,087	15,084	3,506	3,146	1,134	150	205	1,064	7,700	1,370					
Chinese	2,022	2,354	2,469	2,239	1,843	1,576	1,697	2,148	4,017	4,463					
Croatian, Slovenian	42,499	37,284	1,942	791	305	33	23	493	11,035	3,783					
Cuban	3,099	3,539	3,402	3,442	3,428	1,179	1,169	1,510	1,523	698					
Dalmatian, Bosnian, Herzegovinian .	4,520	5,149	305	114	94	15	4	63	930	307					
Dutch, Flemish . .	14,507	12,566	6,675	6,443	5,393	2,200	2,735	12,730	12,813	3,749					
East Indian . . .	188	172	82	80	69	61	68	160	353	223					
English	55,522	51,746	38,662	36,168	32,246	12,980	26,889	58,366	54,627	30,429					
Finnish	12,756	12,805	3,472	5,649	5,900	1,867	968	1,510	4,233	2,506					
French	20,652	18,166	12,636	19,518	24,405	6,840	12,598	27,390	24,122	13,617					
German	80,865	79,871	20,729	11,555	9,682	1,992	1,837	7,338	24,168	31,218					
Greek	38,644	45,881	15,187	26,792	25,919	2,602	813	13,998	31,828	3,821					
Hebrew	101,330	138,051	26,497	15,108	17,342	3,672	3,055	14,292	119,036	53,524					
Irish	37,023	33,898	23,503	20,636	17,462	4,657	7,910	20,784	39,056	17,191					
Italian (north) . .	42,534	44,802	10,660	4,905	3,796	1,074	1,236	12,918	27,459	6,098					
Italian (south) . .	231,613	251,612	46,557	33,909	35,154	5,238	2,137	84,882	195,037	35,056					
Japanese	8,302	8,941	8,609	8,711	8,925	10,164	10,056	9,279	7,531	6,361					

TABLE 17 (*Continued*). — IMMIGRANT ALIENS ADMITTED, BY RACE OR PEOPLE: 1913–1922, YEARS ENDED JUNE 30

[Source: Reports of the Commissioner General of Immigration, Department of Labor]

RACE OR PEOPLE	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
Korean	64	152	146	154	194	149	77	72	61	88					
Lithuanian	24,647	21,584	2,638	599	479	135	160	422	829	1,602					
Magyar	30,610	44,538	3,604	981	434	32	52	252	9,377	6,037					
Mexican	10,954	13,089	10,993	17,198	16,438	17,602	28,844	51,042	29,603	18,246					
Pacific Islander	11	1	6	5	10	17	6	17	13	7					
Polish	174,365	122,657	9,065	4,502	3,109	668	732	2,519	21,146	6,357					
Portuguese	13,566	9,647	4,376	12,208	10,194	2,319	1,574	15,174	18,856	1,867					
Rumanian	13,451	24,070	1,200	953	522	155	89	898	5,925	1,520					
Russian	51,472	44,957	4,459	4,858	3,711	1,513	1,532	2,378	2,887	2,486					
Ruthenian (Russniak)	30,588	36,727	2,933	1,365	1,211	49	103	258	958	698					
Scandinavian	38,737	36,053	24,263	19,172	19,596	8,741	8,261	16,621	25,812	16,678					
Scotch	21,293	18,997	14,310	13,515	13,350	5,204	10,364	21,180	24,649	15,596					
Slovak	27,234	25,819	2,069	577	244	35	85	3,824	35,047	6,001					
Spanish	9,042	11,064	5,705	9,259	15,019	7,909	4,224	23,594	27,448	1,879					
Spanish-American	1,363	1,544	1,667	1,881	2,587	2,231	3,092	3,934	3,325	1,446					
Syrian	9,210	9,023	1,767	676	976	210	231	3,047	5,105	1,334					
Turkish	2,015	2,693	273	216	454	24	18	140	353	40					
Welsh	2,820	2,558	1,390	983	793	278	608	1,462	1,748	956					
West Indian (except Cuban)	1,171	1,396	823	948	1,369	732	1,223	1,546	1,553	976					
All other peoples	3,038	3,830	1,877	3,388	2,097	314	247	1,345	3,237	743					
Total	1,197,892	1,218,480	326,700	298,826	295,403	110,618	141,132	430,001	805,228	309,556					

TABLE 18. — FOREIGN-BORN POPULATION, CENSUS YEARS: 1870–1920

[Source: Reports of the Bureau of the Census, Department of Commerce]

COUNTRY OF BIRTH	NUMBER					
	1870	1880	1890	1900	1910	1920
Total foreign born	5,567,229	6,679,943	9,249,560	10,413,276	13,515,886	13,920,692
Europe	4,936,618	5,744,311	8,020,608	8,871,780	11,791,841	11,882,053
Northwestern Europe.						
England	555,046	664,160	909,092	840,513	877,719	813,853
Scotland	140,835	170,136	242,231	233,524	261,076	254,570
Wales	74,533	83,302	100,079	93,586	82,488	67,066
Ireland	1,855,827	1,854,571	1,871,509	1,615,459	1,352,251	1,037,234
Norway	114,246	181,729	322,665	336,388	403,877	363,863
Sweden	97,332	194,337	478,041	582,014	665,207	625,585
Denmark	30,107	64,196	132,543	153,690	181,649	189,154
Netherlands	46,802	58,090	81,828	94,931	120,063	131,766
Belgium	12,553	15,535	22,639	29,757	49,400	62,687
Luxemburg	5,802	12,836	2,882	3,031	3,071	12,585
Switzerland	75,153	88,621	104,069	115,593	124,848	118,659
France	116,402	106,971	113,174	104,197	117,418	153,072
Central and Eastern Europe						
Germany	1,690,533	1,966,742	2,784,894	2,663,418	2,311,237	1,686,108
Poland	14,436	48,557	147,440	383,407	937,884	1,139,979
Czechoslovakia						362,438
Austria	70,797	124,024	241,377	432,798	845,555	575,627
Hungary	3,737	11,526	62,435	145,714	495,609	397,283
Yugo-Slavia						169,439
Serbia					4,639	
Montenegro					5,374	
Russia and Lithuania	4,644	35,722	182,644	423,726	1,184,412	1,535,563
Finland				62,641	129,680	149,824
Rumania				15,032	65,923	102,823
Bulgaria					11,498	10,477
Turkey in Europe	302	1,205	1,839	9,910	32,230	5,284
Southern Europe.						
Greece	390	776	1,887	8,515	101,282	175,976
Albania						5,601
Italy	17,157	44,230	182,580	484,027	1,343,125	1,610,118
Spain	3,764	5,121	6,185	7,050	22,108	49,533
Portugal	4,542	8,138	15,996	30,608	59,360	69,985
Other Europe	1,678	3,786	12,579	2,251	2,858	5,901
Asia	64,565	107,630	113,396	120,248	191,484	237,950
Armenia						36,628
Palestine					59,729	3,203
Syria						51,901
Turkey in Asia						11,019
China	63,042	104,468	106,701	81,534	56,756	43,560
Japan	73	401	2,292	24,788	67,744	81,502
India	586	1,707	2,143	2,031	4,664	4,901
Other Asia	864	1,054	2,260	11,895	2,591	5,236
America	551,335	807,230	1,088,245	1,317,380	1,489,231	1,727,017
Canada and Newfoundland	493,464	717,157	980,938	1,179,922	1,209,717	1,138,174
Canada —						
French			302,496	395,126	385,083	307,786
Other			678,442	784,796	819,554	817,139
Newfoundland					5,080	13,249
West Indies	11,570	16,401	23,256	25,435	47,635	78,962
Mexico	42,435	68,399	77,853	103,393	221,915	486,418
Central and South America	3,868	5,273	6,198	8,630	9,964	23,463
All other	14,711	20,772	27,311	31,868	43,330	73,672

The trend of immigration from all countries is shown in the foregoing table. It discloses the interruption by the World War and the tendencies since the peace.

Examples

1. If the quota law of 1924 had been in force during the years covered by the above table what countries would have had fewer immigrants? How many immigrants from each country would have been prohibited from coming each year?

2. Which ten countries have furnished the largest number of immigrants in the period 1912 to 1922?

3. Secure the latest immigration statistics from the U. S. Bureau of Immigration or from the *Statistical Abstract of the United States* and compare the number of people coming from each country with that of previous years and with the quota.

The Immigrant Population

The Census of 1920 found 13,920,692 foreign-born people living in the United States divided among nationalities as indicated in Table 18.

Examples

1. Which countries had increases and which decreases in number of immigrants in the United States at each census? Account for the changes.

2. Which countries show marked changes? Account for these differences.

3. How many were there of each nationality in every thousand of the total population at each census?

4. Compare the number and increase or decrease of foreign-born from the different continents.

Age and Sex of Immigrants

The composition of the immigrant arrivals by age and sex is shown in the next table. It will be seen that while the

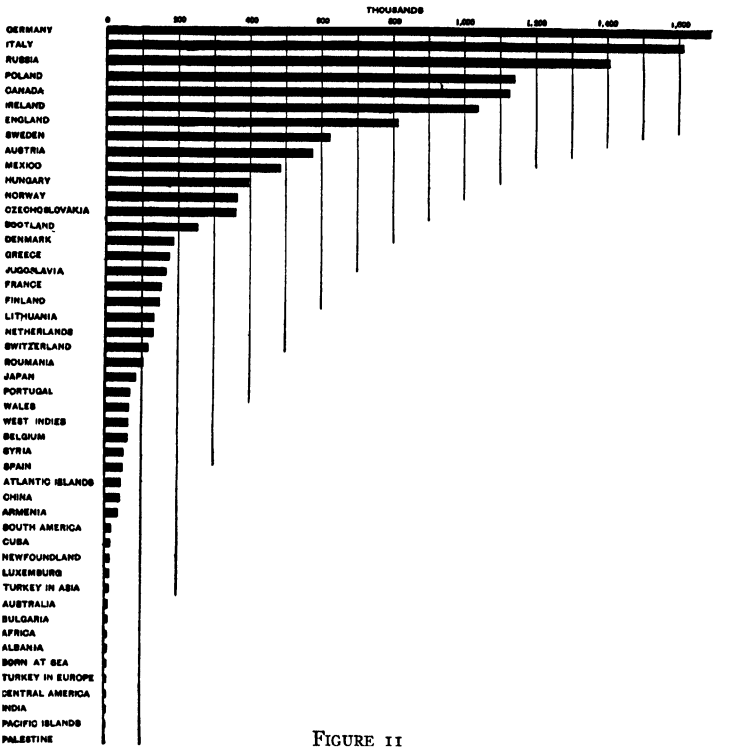


FIGURE 11

number of females immigrating has never been previously so large as that of males, yet in 1922 more women than men came to this country. The number of children is also a considerable item in each year's immigration total. This is a healthy sign, for it indicates that the immigrants are bringing their families and consequently that they will remain to become citizens of this country. It means, too, that the immigrant is living under better conditions when his family is with him.

TABLE 19. — TOTAL NUMBER OF IMMIGRANTS, ALSO IMMIGRANTS DEBARRED, BY SEX AND AGE, IN SPECIFIED YEARS: 1906–1922

[Source: Reports of the Commissioner General of Immigration]

YEAR ENDED JUNE 30	TOTAL IMMIGRANTS	MALE	FEMALE	UNDER 14 YEARS	14 TO 45 YEARS	45 YEARS AND OVER	DEBARRED FROM LANDING
1906	1,100,735	764,463	336,272	136,273	913,955	50,507	12,432
1907	1,285,349	929,976	355,373	138,344	1,100,771	46,234	13,064
1908	782,870	506,912	275,958	112,148	630,671	40,051	10,902
1909	751,786	519,969	231,817	88,393	624,876	38,517	10,411
1910	1,041,570	736,038	305,532	120,509	868,310	52,751	24,270
1911	878,587	570,057	308,530	117,837	714,709	46,041	22,349
1912	838,172	529,931	308,241	113,700	678,480	45,992	16,057
1913	1,197,892	808,144	389,748	147,158	986,355	64,379	19,938
1914	1,218,480	798,747	419,733	158,621	981,692	78,167	33,041
1915	326,700	187,021	139,679	52,982	244,472	29,246	24,111
1916	298,826	182,229	116,597	47,070	220,821	30,935	18,867
1917	295,403	174,479	120,924	47,467	214,616	33,320	16,028
1918	110,618	61,880	48,738	21,349	76,098	13,171	7,297
1919	141,132	83,272	57,860	26,373	97,341	17,418	8,626
1920	430,001	247,625	182,376	81,890	307,589	40,522	11,795
1921	805,228	449,422	355,806	146,613	587,965	70,650	13,779
1922	309,556	149,741	159,815	63,710	210,164	35,682	13,731
1923							
1924							
1925							
1926							
1927							

Examples

1. In which years did the number of child immigrants under 14 years form the largest percentage of immigration?
2. In what years did the number of female immigrants form the largest proportion of immigrants?
3. Compare the number of men and women immigrants for each year.
4. What years showed the greatest proportion of debarments?

EMIGRATION

The discussion of immigration frequently leaves out of account the offsetting emigration. A large part of the

immigrant arrivals go back to their homes; some may come and go several times. The U. S. Immigration Bureau publishes the statistics every year showing the number of immigrants arriving and departing.

TABLE 20. — IMMIGRANTS AND EMIGRANTS TO AND FROM THE UNITED STATES: 1908–1922

	IMMIGRANT	EMIGRANT
1908	782,870	395,073
1909	751,786	225,802
1910	1,041,570	202,436
1911	878,587	295,666
1912	838,172	333,262
1913	1,197,892	308,190
1914	1,218,480	303,338
1915	326,700	204,074
1916	298,826	129,765
1917	295,403	66,277
1918	110,618	94,585
1919	141,132	123,522
1920	430,001	288,315
1921	805,228	247,718
1922	309,556	198,712
Total	9,426,821	3,416,735
1923		
1924		
1925		
1926		
1927		

Examples

1. What percentage of immigrants returned to their home lands from 1908 to 1922?

2. If this same percentage prevailed throughout our history, how many of the 35,292,506 immigrants who came here between 1820 and 1923 returned?

3. In which years was the largest number of returning immigrants?

4. Account for the large number returning in certain years — as 1908, 1914, 1920, and 1921.

5. Would it be wise to force immigrants to become citizens of this country?

6. What can be done best to encourage immigrants to stay permanently and become citizens?

7. Bring this table down to date.

The Distribution of Immigrants

The tendency is found among immigrants to congregate in the cities and especially in the large cities. The total number of foreign-born persons residing in urban centers in 1920 was 75.8 per cent of the total foreign population as against 71.4 per cent in 1910.

Table 21. — Foreign-born Population of Twelve Cities with Largest Number

New York	1,991,547	San Francisco	140,200
Chicago	805,482	Buffalo	121,530
Philadelphia	397,927	Pittsburgh	120,266
Detroit	289,297	Newark	117,003
Cleveland	239,538	Los Angeles	112,057
Boston	238,919	Milwaukee	110,068

It will be seen from this table that in the two largest cities, New York and Chicago, there were 2,797,029 foreign-born persons, or about 20 per cent of the total in the country.

Table 22. — Foreign-born Population of New York City and Chicago. 1920

TOTAL POPULATION	NEW YORK	CHICAGO
Total foreign-born	1,991,547	805,482
England	71,404	26,420
Scotland	21,545	9,910
Wales	1,510	1,584
Ireland	203,450	56,786
Norway	24,500	20,481

TABLE 22 (*Continued*). — FOREIGN-BORN POPULATION OF NEW YORK CITY AND CHICAGO: 1920

TOTAL POPULATION	NEW YORK	CHICAGO
Sweden	33,703	58,563
Denmark	9,092	11,268
Netherlands	4,750	8,843
Belgium	3,467	3,079
Luxembourg	302	1,976
Switzerland	9,233	3,452
France	10,452	3,378
Alsace-Lorraine	3,568	1,180
Germany	194,154	112,288
Poland	145,679	137,611
Czechoslovakia	26,437	50,392
Austria	126,739	30,491
Hungary	64,393	26,106
Jugo-Slavia	5,271	9,693
Russia	479,797	102,095
Lithuania	7,475	18,923
Finland	10,240	1,577
Roumania	38,139	5,137
Bulgaria	308	385
Turkey in Europe	1,754	101
Greece	21,455	11,546
Albania	103	27
Italy	390,832	59,215
Spain	10,980	374
Portugal	1,026	41
Other Europe	425	249
Armenia	3,779	1,028
Asia Minor	442	56
Palestine	913	206
Syria	4,485	478
Turkey in Asia	2,273	336
Other Asia	872	912
Canada — French	1,757	2,432
Canada — Other	23,514	23,622
Newfoundland	1,403	194
Mexico	2,487	1,141
West Indies	8,722	297
Central and South America	6,621	533
Atlantic Islands	414	24
Centralia	1,023	352
Others	1,659	709

Examples

1. Why do immigrants congregate in cities?
2. Is it a healthy social condition to have such congestion of immigrants in our cities?
3. What can be done to distribute the immigrant people?
4. What would be the advantage of a policy encouraging immigrants to take up farm work?
5. Make a table in order of numbers showing the number of immigrants from each country in your own city, county, and state.
6. Compare the number of foreign-born people of each nationality in New York and Chicago with the population of important cities in their native country. For instance, how does the Italian population in these cities compare with that of such cities as Rome, Naples, Genoa, and Florence?
7. What percentage of the total population of the leading cities was foreign-born? Which had the largest proportion of foreign-born?

Immigrants and Naturalization

To what extent do the immigrants become citizens of this country? Citizenship is open to all immigrants except Orientals. The extent to which those who are permitted to become citizens actually do voluntarily assume the duties and obligations of citizenship is an important fact. The total foreign-born white population in 1920 was 12,498,720, of whom 6,208,697, or 49.7 per cent, had been naturalized and 1,194,276 had begun the process of naturalization by taking out their first papers. There were 4,364,909 who were still aliens and 730,838 whose status was not reported. When we recall that it takes five years to become a citizen and that many hundreds of thousands of immigrants had not been here long enough to become citizens, the fact that almost half were citizens in 1920 is an encouraging one.

The extent to which each nationality had become naturalized in 1920 in this country follows in the next table.

TABLE 23. — NATURALIZATION BY COUNTRY OF ORIGIN: 1920

COUNTRY OF BIRTH	TOTAL	NATURALIZED NUMBER	HAVING FIRST PAPERS	ALIEN	NOT REPORTED
England	745,398	487,639	54,838	138,449	64,472
Scotland	231,534	145,672	19,749	46,843	19,270
Wales	64,235	47,760	3,199	6,827	6,449
Ireland	1,021,677	674,921	52,264	199,566	94,926
Norway	348,885	238,032	31,907	56,223	22,723
Sweden	605,549	423,692	52,226	95,296	34,335
Denmark	180,798	127,539	16,552	24,749	11,958
Netherlands	117,177	69,921	13,082	26,878	7,296
Belgium	54,342	27,990	8,028	14,778	3,546
Luxemburg	12,181	8,945	963	1,310	963
Switzerland	114,392	75,508	8,659	20,215	10,010
France	140,896	82,730	10,912	34,423	12,831
Germany	1,648,884	1,213,451	115,195	191,755	128,483
Poland	1,048,050	302,635	146,098	569,411	29,906
Czecho-Slovakia	335,330	158,335	48,352	114,813	13,830
Austria	528,161	204,660	66,735	231,603	25,163
Hungary	353,792	106,183	52,860	181,761	12,988
Jugo-Slavia	155,956	38,816	28,523	84,219	4,398
Russia	1,211,337	509,561	134,530	521,448	45,798
Lithuania	127,642	33,233	16,730	74,836	2,843
Finland	140,015	58,873	18,513	57,070	5,559
Roumania	92,117	38,880	12,336	37,465	3,436
Bulgaria	9,964	1,167	1,697	6,660	440
Turkey in Europe	4,601	968	655	2,805	173
Greece	161,515	28,129	21,044	105,353	6,989
Albania	5,090	370	507	4,100	113
Italy	1,408,933	419,713	159,686	784,927	44,607
Spain	41,436	4,450	2,347	32,716	1,923
Portugal	56,576	10,065	2,394	42,149	1,968
Other Europe	2,841	1,066	350	1,023	402
Armenia	33,526	10,013	4,563	17,777	1,173
Asia Minor	2,140	736	301	995	108
Palestine	2,539	973	343	1,058	165
Syria	46,575	14,057	5,872	24,251	2,395
Turkey in Asia	7,623	1,732	824	4,691	376
Other Asia	6,546	2,516	810	2,667	553
Canada — French	274,176	132,981	23,176	103,573	14,446
Canada — Other	727,340	448,503	47,715	162,347	68,775
Newfoundland	12,260	6,074	1,213	3,950	1,023
Mexico	319,697	17,624	2,746	285,122	14,205
West Indies (exc Porto Rico)	21,659	6,681	1,195	11,000	2,783
Central and South America	14,546	4,050	1,123	7,777	1,596
Africa	3,598	1,746	377	1,143	332
Australia	9,722	4,999	898	2,815	1,010
Atlantic	33,557	7,731	1,271	23,498	1,057
Pacific islands	3,197	1,721	274	854	348
All other	10,715	5,656	644	1,720	2,695
All countries	12,498,720	6,208,697	1,194,276	4,364,909	730,838

PER CENT NATURALIZED IN FOREIGN-BORN WHITE POPULATION, BY COUNTRY OF BIRTH: 1920

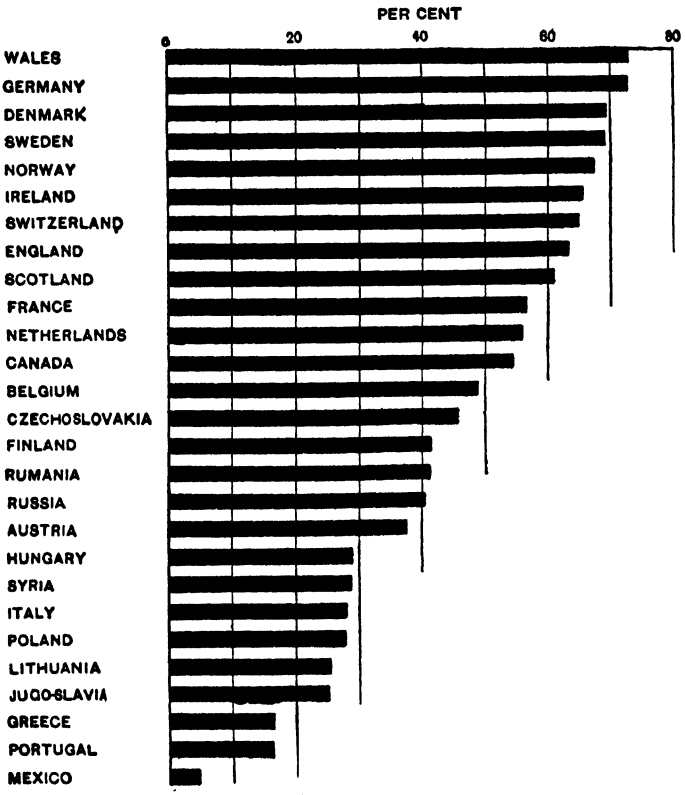


FIGURE 12

The rapidity with which the process of naturalization is proceeding is disclosed by the U. S. Naturalization Bureau in the next table, which shows the number naturalized for the last ten years. The rapid increases since the war are noticeable.

TABLE 24. — UNITED STATES NATURALIZATION STATISTICS: 1908–1923

YEAR (FISCAL)	DECLARATIONS	PETITIONS	CERTIFICATES	YEAR (FISCAL)	DECLARATIONS	PETITIONS	CERTIFICATES
1908	137,751	44,032	25,975	1918	342,283	105,514	87,456
1909	145,745	43,141	38,374	1919	391,156	18,523	89,023
1910	169,348	55,750	39,448	1920	299,076	166,760	125,711
1911	189,249	74,740	56,683	1921	303,904	177,898	163,656
1912	171,133	95,661	70,310	1922	273,511	153,170	160,979
1913	182,095	95,380	83,561	1923	296,636	158,059	137,975
1914	214,104	124,475	104,145	1924			
1915	247,958	106,399	91,848	1925			
1916	209,204	108,767	87,831	1926			
1917	440,651	130,865	91,848	1927			

Not included above are certificates issued to American soldiers or sailors in the World War, as follows — (1918) 63,993; (1919) 128,335; (1920) 51,972; (1921) 17,636; (1922) 9,468; (1923) 7,109.

Examples

1. Which nationalities show the greatest proportion acquiring American citizenship? Which show the least?

2. Does this indicate relative zeal for American citizenship or is it partly due to other causes?

3. Why does the Mexican population show so small a percentage?

4. Why do Canadians show a large percentage?

5. Account for differences between the percentage of French-Canadians and English-Canadians who have become citizens.

6. Determine whether net immigration or naturalization has been increasing the faster. Do we have as many unnaturalized foreigners today as when the census was taken in 1920?

7. Find the number of unnaturalized immigrants in your own city and state at the Census of 1920.

8. Account for the great increases in naturalization in recent years.

9. Secure the latest statistics of naturalization from the U. S. Bureau of Naturalization and bring the table down to date.

WHERE THE IMMIGRANTS LIVE

The foreign-born population in this country at the Census of 1920 was distributed by states as shown in the next table.

TABLE 25. — TOTAL FOREIGN-BORN POPULATION OF UNITED STATES: 1920

STATE	TOTAL	STATE	TOTAL	STATE	TOTAL
Alabama	18,027	Maine	107,814	Oklahoma	40,432
Arizona	80,566	Maryland	103,179	Oregon	107,644
Arkansas	14,137	Massachusetts	1,088,548	Pennsylvania	1,392,557
California	757,625	Michigan	729,292	Rhode Island	175,189
Colorado	119,138	Minnesota	486,795	South Carolina	6,582
Connecticut	378,439	Mississippi	8,408	South Dakota	82,534
Delaware	19,901	Missouri	186,835	Tennessee	15,648
District of Columbia	29,365	Montana	95,591	Texas	363,832
Florida	53,864	Nebraska	150,665	Utah	59,200
Georgia	16,564	Nevada	16,003	Vermont	44,558
Idaho	40,747	New Hampshire	91,397	Virginia	31,705
Illinois	1,210,584	New Jersey	742,486	Washington	265,292
Indiana	151,328	New Mexico	20,808	West Virginia	62,105
Iowa	225,994	New York	2,825,375	Wisconsin	460,485
Kansas	110,967	North Carolina	7,272	Wyoming	26,567
Kentucky	30,906	North Dakota	131,863		
Louisiana	46,427	Ohio	680,452	Total United States	13,920,692

Examples

1. Find the percentage of foreign-born of the total population in each state.
2. Rank the states according to the proportion of foreign-born.

MIGRATION FROM STATE TO STATE

At the Census of 1920 it was found that 71,071,013 people were living in the state in which they were born, 20,274,450 were found in some other state of the United States than the one of their birth, and 13,920,692 were born in foreign lands. These figures give us a fair picture of the movement of people in search of various objectives such as better economic conditions, health, pleasure, and employment. This movement is a part of the age-long restlessness of people in hope and search of better things. It is instructive to examine how the inflow and outflow of people affects each of the states, and accordingly the next table shows the number of people born in each state who are

TABLE 26. — INTERSTATE MIGRATION

NATIVE POPULATION BY STATE OF BIRTH AND STATE OF RESIDENCE

STATE	BORN IN SPECIFIED STATE		BORN AND LIVING IN STATE	LIVING IN SPECIFIED STATE	
	Total	Living in other States: Number		Total	Born in other States: Number
Maine	807,012	208,667	598,345	656,820	58,475
New Hampshire	391,862	134,788	257,074	349,024	91,950
Vermont	406,955	156,417	250,538	305,286	54,748
Massachusetts	2,693,737	428,459	2,265,287	2,752,529	487,242
Rhode Island	417,677	92,885	324,792	427,582	102,790
Connecticut	942,870	186,658	756,212	998,017	241,805
New York	8,086,198	1,451,729	6,634,469	7,499,992	865,523
New Jersey	2,025,396	331,937	1,693,459	2,404,990	711,531
Pennsylvania	7,907,934	1,342,946	6,564,988	7,309,242	744,254
Ohio	5,223,474	1,143,716	4,079,758	5,062,775	983,017
Indiana	3,060,703	851,255	2,209,448	2,770,506	561,058
Illinois	5,606,383	1,515,465	4,090,918	5,247,603	1,156,685
Michigan	2,711,479	488,146	2,223,333	2,920,698	697,365
Wisconsin	2,460,101	607,527	1,852,574	2,162,383	309,809
Minnesota	1,817,102	424,926	1,392,176	1,891,760	489,584
Iowa	2,544,207	919,601	1,624,606	2,168,171	543,565
Missouri	3,518,892	1,136,610	2,382,282	2,203,657	821,375
North Dakota	405,379	100,700	304,679	508,771	204,092
South Dakota	432,691	129,431	303,260	550,454	247,194
Nebraska	1,066,914	331,472	735,442	1,138,118	402,676
Kansas	1,535,540	567,702	967,838	1,649,023	681,185
Delaware	207,804	64,841	142,963	202,008	59,045
Maryland	1,416,193	308,903	1,107,290	1,343,424	236,134
District of Columbia	226,066	65,957	160,109	404,331	244,222
Virginia	2,661,359	682,419	1,978,940	2,272,433	293,493
West Virginia	1,378,424	265,081	1,113,343	1,396,895	283,552
North Carolina	2,835,102	443,844	2,391,258	2,549,254	157,996
South Carolina	1,870,809	305,018	1,565,791	1,675,160	109,369
Georgia	3,128,986	533,563	2,595,423	2,874,669	279,246
Florida	652,352	92,249	560,103	909,727	349,624
Kentucky	2,930,790	795,801	2,134,989	2,382,721	247,732
Tennessee	2,743,221	748,641	1,994,580	2,316,909	322,329
Alabama	2,607,273	552,000	2,055,273	2,325,254	269,981
Mississippi	2,087,558	492,422	1,595,136	1,778,541	183,405
Arkansas	1,640,814	443,884	1,196,930	1,730,078	533,148
Louisiana	1,782,749	260,134	1,522,615	1,745,628	223,013
Oklahoma	1,050,159	230,930	819,229	1,975,109	1,155,880
Texas	3,865,863	559,552	3,306,311	4,274,693	968,382
Montana	240,513	67,695	172,818	447,695	274,877
Idaho	210,106	62,078	148,028	388,341	240,313
Wyoming	81,540	32,558	48,982	165,812	116,830
Colorado	473,372	155,866	317,506	809,585	492,079
New Mexico	268,492	59,258	209,234	329,111	119,877
Arizona	139,386	29,610	109,776	247,349	137,573
Utah	408,838	94,832	314,006	388,005	73,999
Nevada	48,232	23,471	24,761	60,495	35,734
Washington	517,036	106,861	410,175	1,072,626	662,451
Oregon	400,453	104,730	295,723	670,015	374,292
California	1,409,467	141,224	1,268,243	2,632,194	1,363,951
United States	91,345,463	20,274,450	71,071,013	91,345,463	20,274,450

living in the state of their birth and the number living in other states. The number who were born in other states and have come into each state is also indicated.

Column one in the table shows the states in which the native population was born. Column two shows the number living in some other state. Column three shows the

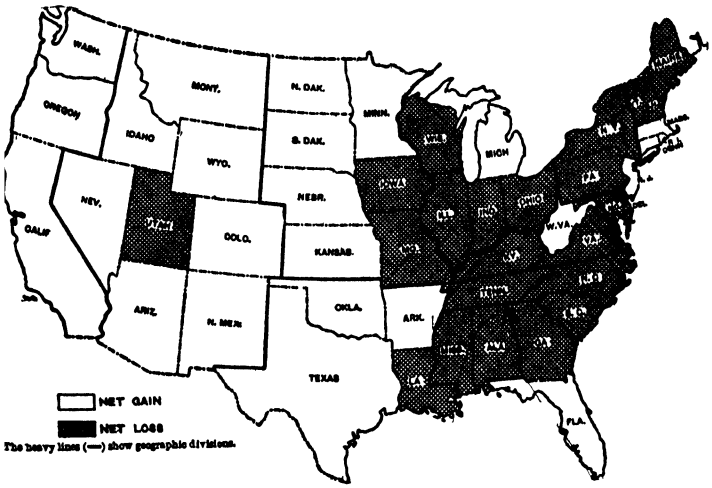


FIGURE 13. — STATES THAT GAINED OR LOST IN POPULATION THROUGH INTERSTATE MIGRATION: 1920

number living in the state where they were born. Column four shows the native-born people residing in each state. Column five gives the number living in each state who were born in other states. The table shows, for example, that there are 807,012 people in the United States who were born in Maine; 598,345 of these still live in Maine, 208,667 in some other state; 656,820 native-born people were living in Maine; and 58,475 born in other states had gone to live in that state.

Examples

1. Give the gain or loss to each state by migration from state to state.
2. Which state has gained or lost the most in the aggregate and also in proportion to population?
3. Account for the great differences in the various states in this matter.
4. Find the total number of people in each state, including foreign immigrants, that were not born in the state.
5. Which state had the largest percentage of people born elsewhere?

Negro Migration

A phenomenon of migration recently has been the shifting of the negro race, principally from the South to the North. Table 27 shows the results in 1920 of this migration.

This table shows that of the total negro population of 10,342,734, only 8,288,492 lived in the state where they were born. Thus over 2,000,000 had migrated to other states. Several states lost heavily, as will be shown by detailed study.

Examples

1. Which states lost most heavily by negro migration?
2. How many born in each state were living in some other state?
3. Compare the negro population of the states in 1910 and in 1920. (See *Abstract of the Fourteenth Census.*)

Urban and Rural Population

The term *urban* is used by the U. S. Census Bureau to include all cities and villages having a population of more than 2500, and the term *rural* is used to include the farming districts and places having less than 2500 population. It will be observed, therefore, that the figures for cities do not

TABLE 27. — NEGRO MIGRATION, BY STATES: 1920

STATE	TOTAL BORN IN SPECIFIED STATE	BORN AND LIVING IN SPECIFIED STATE	STATE	TOTAL BORN IN SPECIFIED STATE	BORN AND LIVING IN SPECIFIED STATE
United States	10,342,734	8,288,492	Virginia	883,140	617,324
NEW ENGLAND:			West Virginia	45,117	33,347
Maine	1,497	717	North Carolina	876,128	714,449
New Hampshire	575	268	South Carolina	1,016,276	847,026
Vermont	1,329	331	Georgia	1,325,652	1,123,394
Massachusetts	23,386	17,931	Florida	253,655	217,229
Rhode Island	6,602	4,430	EAST SOUTH CENTRAL		
Connecticut	11,397	7,888	Kentucky	303,606	201,335
MIDDLE ATLANTIC:			Tennessee	512,872	365,769
New York	77,751	62,369	Alabama	1,032,321	841,668
New Jersey	54,015	42,797	Mississippi	1,071,919	861,340
Pennsylvania	126,537	100,500	WEST SOUTH CENTRAL		
EAST NORTH CENTRAL:			Arkansas	362,543	311,247
Ohio	88,394	66,836	Louisiana	749,704	634,353
Indiana	40,799	27,540	Oklahoma	78,026	64,079
Illinois	62,727	44,130	Texas	732,810	655,065
Michigan	14,677	10,382	MOUNTAIN:		
Wisconsin	2,483	1,204	Montana	859	435
WEST NORTH CENTRAL:			Idaho	335	123
Minnesota	3,326	1,838	Wyoming	429	134
Iowa	11,584	6,132	Colorado	4,676	2,335
Missouri	146,635	101,702	New Mexico	1,273	467
North Dakota	536	101	Arizona	1,227	524
South Dakota	833	244	Utah	691	189
Nebraska	4,155	2,155	Nevada	181	53
Kansas	38,784	23,687	PACIFIC:		
SOUTH ATLANTIC:			Washington	2,731	1,106
Delaware	30,919	20,438	Oregon	596	307
Maryland	263,899	196,729	California	10,771	8,366
District of Columbia	62,356	46,569			

take account of the large number of people living in small towns and villages, whereas the rural population is increased by including the residents of villages of fewer than 2500 population.

The trend of population has been toward the city for several decades. The census discloses this trend every ten years by figures showing that a larger percentage of the people live under urban conditions than at the previous census.

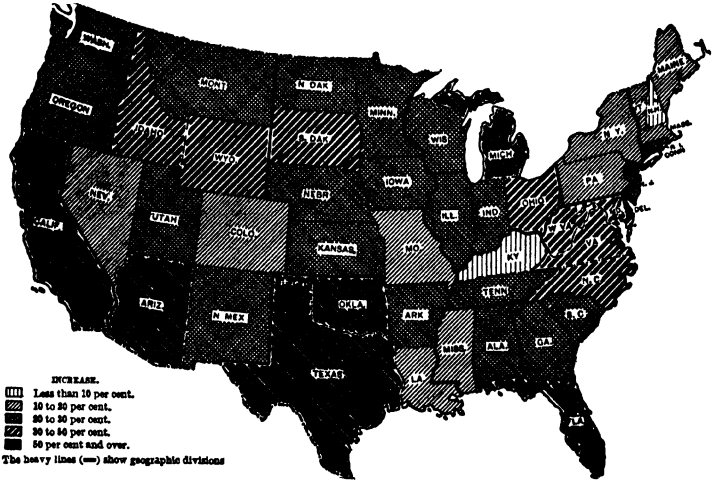


FIGURE 14. — PERCENTAGE OF INCREASE IN POPULATION OF TERRITORY URBAN IN 1920, BY STATES: 1910–1920

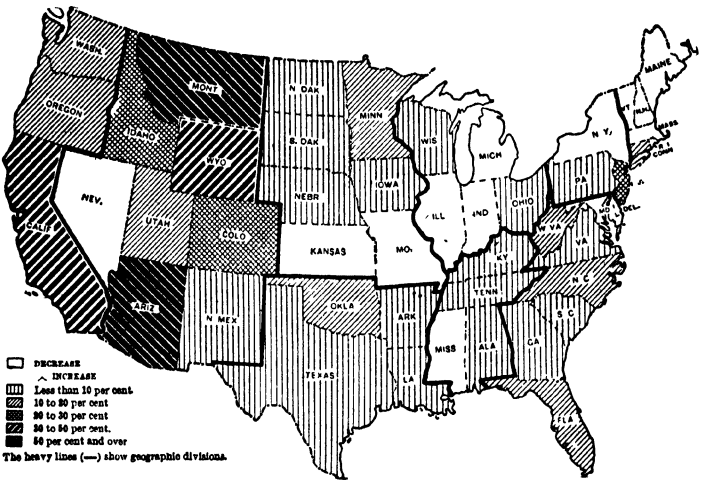


FIGURE 15. — PERCENTAGE OF INCREASE IN POPULATION OF TERRITORY RURAL IN 1920, BY STATES: 1910–1920

TABLE 28. — DISTRIBUTION OF POPULATION IN CITIES AND IN RURAL TERRITORY

CLASS OF PLACES	1920		1910		1900		1890	
	No Places	Population	No Places	Population	No Places	Population	No. Places	Population
Total population of the United States		105,710,620		91,972,266		75,994,575		62,947,714
Urban territory	2,787	54,304,603	2,313	42,166,120	1,801	30,380,433	1,417	22,298,359
Places of 1,000,000 or more	3	10,145,532	3	8,501,174	3	6,429,474	3	3,662,115
Places of 500,000 to 1,000,000	9	6,223,769	5	3,010,667	3	1,645,087	1	806,343
Places of 250,000 to 500,000	13	4,540,838	11	3,949,838	9	2,861,296	7	2,447,608
Places of 100,000 to 250,000	43	6,519,187	31	4,840,458	23	3,272,490	17	2,781,894
Places of 50,000 to 100,000	76	5,265,747	59	4,178,915	40	2,709,338	30	2,022,822
Places of 25,000 to 50,000	143	5,075,041	119	4,026,045	82	2,800,627	66	2,268,786
Places of 10,000 to 25,000	459	6,942,742	367	5,524,434	280	4,338,250	228	3,429,247
Places of 5,000 to 10,000	721	4,997,794	612	4,254,856	468	3,220,766	339	2,372,717
Places of 2,500 to 5,000	1,320	4,593,953	1,106	3,879,732	893	3,103,105	726	2,506,827
Rural territory		51,406,017		49,806,146		45,614,142		40,649,355
Including places less than 2,500	12,905	8,969,241	11,832	8,169,149	8,930	6,301,533	6,490	4,757,974
Other rural territory		42,436,776		41,636,997		39,312,609		35,891,381

In 1890 only 35.5 per cent lived in urban centers. In 1900 the percentage was 40.0 per cent, while in 1910 and 1920 it was 45.8 per cent and 51.4 per cent respectively. It thus appears from the Census of 1920 that the urban population exceeds half of the total population.

The growth of the urban population in the larger cities is especially noteworthy. While the urban population has been increasing over the rural, the urban population in larger cities has been increasing even faster. Thus in 1890, cities over 500,000 population constituted 7.1 per cent of the total population of the country, whereas in 1920 the percentage had increased to 15.2 per cent.

Examples

1. What percentage of all the people of the United States was living in cities of the different-sized groups in 1920, 1910, 1900, and 1890?
2. Compare the growth of each group at the four censuses.
3. For every 100 rural dwellers in each year how many city dwellers were there?
4. If the urban population increases at the same rate as between 1910 and 1920, what percentage of the population will be urban in 1930? Is such increase likely?
5. What are the reasons for the increase of urban over rural population?

Urban and Rural Population by States

In the following table is shown the number of people in each state living under urban and rural conditions at the time of each of the last three censuses.

The facts brought out in this table indicate not only that the urban population is increasing faster than the rural but also that in several states the rural population is actually decreasing.

TABLE 29. — DISTRIBUTION OF POPULATION AS URBAN AND RURAL, BY STATES: 1900, 1910, AND 1920

[Source: Reports of the Bureau of the Census]

STATE	URBAN 1900	RURAL 1900	URBAN 1910	RURAL 1910	URBAN 1920	RURAL 1920
Alabama	216,714	1,611,983	370,431	1,767,662	509,317	1,838,857
Arizona	19,495	103,436	63,260	141,094	117,527	216,635
Arkansas	111,733	1,199,831	202,681	1,371,768	290,497	1,461,707
California	777,699	707,354	1,469,739	907,810	2,331,729	1,095,132
Colorado	260,651	279,049	404,840	394,184	453,259	486,370
Connecticut	543,755	364,665	731,797	382,959	936,339	444,292
Delaware	85,717	99,018	97,085	105,237	120,767	102,236
District of Columbia	278,718		331,069		437,571	
Florida	107,031	421,511	219,080	533,539	355,825	612,645
Georgia	346,382	1,869,949	538,650	2,070,471	727,859	2,167,973
Idaho	10,003	151,769	69,898	255,696	119,037	312,829
Illinois	2,616,368	2,205,182	3,476,029	2,161,662	4,403,153	2,082,127
Indiana	862,689	1,653,773	1,143,835	1,557,041	1,482,855	1,447,535
Iowa	572,386	1,659,467	680,054	1,544,717	875,495	1,528,526
Kansas	330,903	1,139,592	493,790	1,197,159	617,964	1,151,293
Kentucky	467,668	1,679,506	555,442	1,734,463	633,543	1,783,087
Louisiana	366,288	1,015,337	496,516	1,159,872	628,163	1,170,346
Maine	232,827	461,639	262,248	480,123	299,569	468,445
Maryland	591,206	596,838	658,192	637,154	869,422	580,239
Massachusetts	2,567,098	238,248	3,125,367	241,049	3,650,248	202,108
Michigan	952,323	1,468,659	1,327,044	1,483,129	2,241,560	1,426,852
Minnesota	598,100	1,153,294	850,294	1,225,414	1,051,593	1,335,532
Mississippi	120,035	1,431,235	207,311	1,589,803	240,121	1,550,497
Missouri	1,128,104	1,978,561	1,398,817	1,894,518	1,586,903	1,817,152
Montana	84,554	158,775	133,420	242,633	172,011	376,878
Nebraska	252,702	813,598	310,852	881,362	405,306	891,066
Nevada	7,195	35,140	13,367	68,508	15,254	62,153
New Hampshire	226,269	185,319	255,099	175,473	279,761	163,322
New Jersey	1,329,162	554,507	1,907,210	629,957	2,474,936	680,964
New Mexico	27,381	167,929	46,571	280,730	64,960	295,390
New York	5,298,111	1,970,783	7,185,494	1,928,120	8,589,844	1,795,383
North Carolina	186,790	1,707,020	318,474	1,887,813	490,370	2,068,753
North Dakota	23,413	295,733	63,236	513,820	88,239	558,633
Ohio	1,998,382	2,159,163	2,665,143	2,101,978	3,677,136	2,082,258
Oklahoma	58,417	731,974	320,155	1,337,000	539,480	1,488,803
Oregon	133,180	280,356	307,060	365,705	391,019	392,370
Pennsylvania	3,448,610	2,853,505	4,630,669	3,034,442	5,607,815	3,112,202
Rhode Island	407,647	20,909	524,654	17,956	589,180	15,217
South Carolina	171,256	1,169,060	224,832	1,290,568	293,987	1,389,737
South Dakota	40,936	360,634	76,673	507,215	101,872	534,675
Tennessee	326,639	1,693,977	441,045	1,743,744	611,226	1,726,659
Texas	520,759	2,527,951	938,104	2,958,438	1,512,689	3,150,539
Utah	105,427	171,322	172,934	200,417	215,584	233,812
Vermont	75,831	267,810	98,917	257,039	109,976	242,452
Virginia	340,067	1,514,117	476,529	1,585,083	673,984	1,635,203
Washington	211,477	306,626	605,530	536,460	748,735	607,886
West Virginia	125,465	833,335	228,242	992,877	369,007	1,094,694
Wisconsin	790,213	1,278,829	1,004,320	1,329,540	1,244,568	1,387,499
Wyoming	26,657	65,874	43,221	102,744	57,348	137,054
Total	30,380,433	45,614,142	42,166,120	49,806,146	54,304,603	51,406,017

Examples

1. What states show a decline in rural population? An increase?
2. Account for the decrease or increase.
3. Tabulate the states in the order of their percentage of urban population at the Census of 1920.
4. What was the percentage of rural and urban population in your state at each of the last three censuses? Of each of the states?

City and Rural Population by Age and Sex

There are some differences in the makeup of the rural and urban population which appear in the following table.

Table 30. — Urban and Rural Population by Age and Sex: 1920

All ages	Urban		Rural	
	Males	Females	Males	Females
All ages	27,203,312	27,101,291	26,697,119	24,708,898
Under 5	2,662,585	2,613,166	3,194,876	3,102,603
5 to 9 years	2,531,575	2,518,701	3,221,426	3,126,373
10 to 14 years	2,313,652	2,350,660	3,055,654	2,921,171
15 to 17 years	2,130,053	2,315,910	2,543,739	2,440,854
18 to 44 years	11,657,721	11,545,548	8,898,244	8,454,030
45 years and over	5,845,617	5,720,580	5,752,414	4,644,769
Unknown	62,109	36,726	30,766	19,098

We note in this table that the number of persons under 20 in each group in the rural areas outnumber those in the cities, and that from 20 upward the number in the city far outnumber those counted as rural. We note also that there is a marked difference in the number of males and females in the country after the age of 44 while the city population remains constant. These facts may be partially accounted for by the drift of people to the city after the age of 20 and by the larger birth rate and lower death rate in the country.

Examples

1. Determine the total number in each age group in urban and rural areas.

2. Find the percentage of the total urban and rural population in each age group.

3. Work out the information in this table for your own state from the census reports. (See Vol. III of the *Fourteenth Census of the United States*, beginning page 53.)

City and Rural Population by Race, Nativity, and Parentage

Table 31. — City and Rural Population by Race, Nativity, and Parentage: 1920–1910

	1920	
	URBAN	RURAL
Total	54,304,603	51,406,017
White	50,620,084	44,200,831
Negro	3,559,473	6,903,658
Foreign-born white	10,356,983	3,355,771
Foreign parentage	11,304,886	4,389,653
Native parentage	24,556,729	33,865,228
Mixed parentage	4,401,486	2,500,179
Orientals, Indians, and others	125,046	301,528
	1910	
	URBAN	RURAL
Total	42,166,120	49,806,146
White	39,379,294	42,352,663
Negro	2,684,797	7,142,966
Foreign-born white	9,532,733	3,812,812
Native parentage	17,621,230	31,867,345
Foreign parentage	8,710,682	4,205,629
Mixed parentage	3,514,649	2,466,877
Orientals and others	102,020	310,517

Examples

1. Find the percentage of each group in rural and urban population.

2. What was the tendency between 1910 and 1920 in each of these groups?

3. What do the figures indicate as to the distribution of immigrants upon arrival in this country?

4. Compile similar information for your state.

Sources for Research

The same sources for study as in the previous chapter are essential here. In addition the annual reports of the United States Immigration Bureau and of the United States Naturalization Bureau are sources of the latest information about immigration and naturalization. The discussions and recommendations of these bureaus throw much light on these subjects.

CHAPTER IV

OCCUPATIONS

Division of labor is the modern system whereby each person performs some part of the task of satisfying needs of all the people. There are thousands of occupations in which people engage and literally hundreds of thousands of separate processes. The tendency is toward greater specialization as new inventions make work more and more subdivided and automatic. At the same time an increasing proportion of the people is employed as processes suitable to the employment of women are developed. The complete facts concerning occupations are gathered only once in ten years at the regular census.

Since modern society is built on the division of labor, the study of the actual distribution of workers in the various occupations is of deep interest. In the statistics of occupations we see the process of satisfying our wants through production and exchange of goods; we see in the trend of occupations also the newer developments which science and inventions are constantly forwarding through the endeavors of men in new or enlarged occupations; and we see also the decadence of some employments and therein we observe significant social facts.

About 50 per cent of the people 10 years of age and over are engaged in some gainful employment. The actual number of people in 1920 over 10 years of age was 82,739,315 and of these 41,614,248 were engaged in gainful

employment. The comparison with previous census years is next shown.

Number Engaged in Gainful Employment

Table 32. — Number Engaged in Gainful Employment

Census Year	Population 10 Years and Over	Number Employed[1]
1880	36,761,607	17,392,099
1890	47,413,559	23,318,183
1900	57,949,824	29,073,233
1910	71,580,270	38,167,336
1920	82,739,315	41,614,248

When the percentage of the employed has been worked out for each census, it will be seen that the proportion of persons gainfully employed has not increased greatly since 1880, and, in fact, decreased between 1910 and 1920 in spite of the well-known increase of women workers. This is due in large part to child-labor laws and in part to increased school attendance resulting from the enforcement of compulsory education laws in all of the states.

Examples

1. Find the percentage of people over 10 years employed in gainful employment at each census.
2. When was the largest percentage employed?
3. Give reasons for increase in the proportion employed.
4. Give reasons for decreases that offset the increases.

Distribution by Main Occupations

The main classifications of occupations used by the Census Bureau are agriculture, forestry, and animal husbandry;

[1] These figures do not include women engaged in their own household work.

extraction of minerals; manufacturing and mechanical industries; transportation; trade; public service; professional

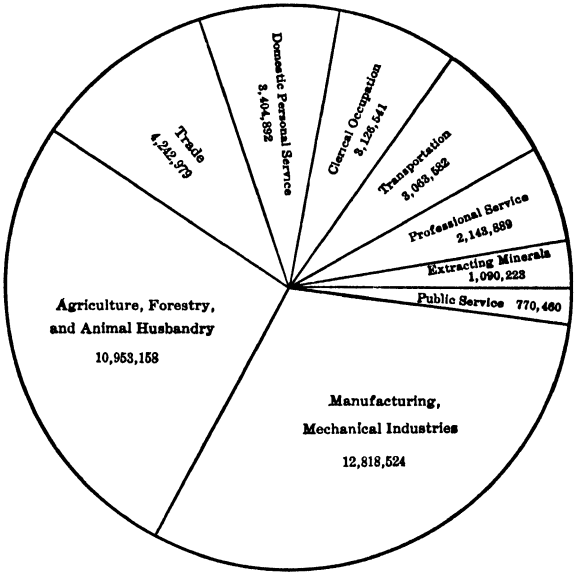


FIGURE 16. — DISTRIBUTION OF POPULATION ACCORDING TO OCCUPATIONS: 1920

service; domestic and personal service; and clerical occupations.

The distribution of population by occupations for 1910 and 1920 follows in Table 33.

Examples

1. What percentage of the people engaged in gainful employment were in each of the divisions of occupations in 1920 and in 1910?
2. Find the percentage of increase or decrease in each division between 1910 and 1920.
3. What causes induced the changes between 1910 and 1920?
4. How many in selected occupations are there among each thousand population in the country?

TABLE 33. — DISTRIBUTION OF POPULATION BY MAIN OCCUPATIONS: 1920 AND 1910

GENERAL DIVISION OF OCCUPATIONS	1920	1910
All occupations	41,614,248	38,167,336
Agriculture, forestry, and animal husbandry	10,953,158	12,659,082
Extraction of minerals	1,090,223	965,169
Manufacturing and mechanical industries	12,818,524	10,628,731
Transportation	3,063,582	2,637,420
Trade	4,242,979	3,614,670
Public service (not elsewhere classified)	770,460	459,291
Professional service	2,143,889	1,693,361
Domestic and personal service	3,404,892	3,772,559
Clerical occupations	3,126,541	1,737,053

TABLE 34. — NUMBER OF PERSONS GAINFULLY OCCUPIED, BY SEX, FOR THE UNITED STATES: 1880–1920

SEX AND CENSUS YEAR	TOTAL POPULATION	POPULATION 10 YEARS OF AGE AND OVER	PERSONS 10 YEARS OF AGE AND OVER ENGAGED IN GAINFUL OCCUPATIONS
BOTH SEXES			
1920	105,710,620	82,739,315	41,614,248
1910	91,972,266	71,580,270	38,167,336
1900	75,994,575	57,949,824	29,073,233
1890	62,622,250	47,413,559	23,318,183
1880	50,155,783	36,761,607	17,392,099
MALE			
1920	53,900,431	42,289,969	33,064,737
1910	47,332,277	37,027,558	30,091,564
1900	38,816,448	29,703,440	23,753,836
1890	32,067,880	24,352,659	19,312,651
1880	25,518,820	18,735,980	14,744,942
FEMALE			
1920	51,810,189	40,449,346	8,549,511
1910	44,639,989	34,552,712	8,075,772
1900	37,178,127	28,246,384	5,319,397
1890	30,554,370	23,060,900	4,005,532
1880	24,636,963	18,025,627	2,647,157

TABLE 35. — NUMBER OF PERSONS 10 YEARS OF AGE AND OVER ENGAGED IN GAINFUL OCCUPATIONS, BY SEX AND POPULATION CLASSES, FOR THE UNITED STATES: 1920

SEX AND CLASS OF POPULATION	POPULATION 10 YEARS OF AGE AND OVER	
	1920	
	Total number	Engaged in Gainful Occupations
		Number
BOTH SEXES		
All classes	**82,739,315**	**41,614,248**
Native white — Native parentage	44,077,564	20,521,997
Native white — Foreign or mixed parentage	16,784,299	8,347,466
Foreign-born white	13,497,886	7,746,460
Negro	8,053,225	4,824,151
Indian, Chinese, Japanese, and all other	326,341	174,174
Indian	176,925	63,326
Chinese	56,230	45,614
Japanese	84,238	57,903
All other	8,948	7,331
MALE		
All classes	**42,289,969**	**33,064,737**
Native white — Native parentage	22,361,495	16,788,668
Native white — Foreign or mixed parentage	8,289,550	6,237,012
Foreign-born white	7,419,691	6,627,997
Negro	4,009,462	3,252,862
Indian, Chinese, Japanese, and all other	209,771	158,198
Indian	91,546	53,478
Chinese	51,041	44,882
Japanese	58,806	52,614
All other	8,378	7,224
FEMALE		
All classes	**40,449,346**	**8,549,511**
Native white — Native parentage	21,716,069	3,733,320
Native white — Foreign or mixed parentage	8,494,749	2,110,454
Foreign-born white	6,078,195	1,118,463
Negro	4,043,763	1,571,289
Indian, Chinese, Japanese, and all other	116,570	15,976
Indian	85,379	9,848
Chinese	5,189	732
Japanese	25,432	5,289
All other	570	107

Distribution by Sex

The number, by sex, of people engaged in gainful employment is given in Table 34.

Examples

1. How does the number of women employed compare with the number of men employed at each census?
2. Which has increased the faster in the percentage employed?
3. Find the percentage of women employed at each census since 1880.
4. What has been the percentage of increase of women workers from 1880 to 1920? Of men?
5. Account for the increase of women workers.

Does any one class of people engage in employment more or less than another? How do the native-born compare with the foreign-born; the negroes with the whites? Table 35 indicates the varying degrees in which people of different groups are employed.

Examples

1. Find the percentage of males and females of each class employed in gainful occupations.
2. In which class is found the largest and smallest percentage of women workers?

Distribution by Geographical Divisions

The number of persons in each of the geographical divisions engaged in employment is next shown in Table 36.

Examples

1. Which geographic division had the largest percentage of males over 10 years engaged in gainful employment? Of females?
2. What percentage of the whole population was engaged in gainful employment in each geographic division?

TABLE 36.—NUMBER EMPLOYED, BY GENERAL DIVISIONS, OF MALES 10 YEARS OF AGE AND OVER IN 1920

DIVISION AND STATE	NUMBER									
	Total males occupied	Agriculture, forestry, and animal husbandry	Extraction of minerals	Manufacturing and mechanical industries	Transportation	Trade	Public service (not otherwise classified)	Professional service	Domestic and personal service	Clerical occupations
United States	**33,064,737**	**9,869,030**	**1,087,359**	**10,888,183**	**2,850,528**	**3,575,187**	**748,666**	**1,127,391**	**1,217,968**	**1,700,425**
GEOGRAPHIC DIVISIONS:										
New England	2,363,377	247,478	4,843	1,253,096	198,556	274,306	65,022	87,538	92,175	140,363
Middle Atlantic	7,122,699	639,254	343,032	3,126,524	741,491	900,307	185,584	294,824	340,120	551,563
East North Central	6,951,808	1,507,033	215,637	2,799,796	577,811	781,712	124,802	237,951	235,962	391,104
West North Central	3,815,681	1,642,663	73,995	849,681	332,124	450,368	57,581	124,742	128,032	156,495
South Atlantic	4,096,041	1,797,738	133,843	1,012,013	308,651	340,787	119,639	110,521	117,631	155,218
East South Central	2,608,411	1,494,091	104,792	454,116	162,267	185,276	34,552	55,462	57,184	60,671
West South Central	3,049,275	1,567,024	82,740	543,527	232,309	277,152	70,896	81,596	94,998	99,033
Mountain	1,077,774	413,355	92,851	210,636	105,500	105,644	29,374	39,420	41,522	39,472
Pacific	1,979,671	480,394	35,626	638,794	191,819	259,635	61,216	95,337	110,344	106,506

TABLE 37.—NUMBER EMPLOYED, BY GENERAL DIVISIONS, OF FEMALES 10 YEARS OF AGE AND OVER IN 1920

DIVISION AND STATE	NUMBER									
	Total female occupied	Agriculture, forestry, and animal husbandry	Extraction of minerals	Manufacturing and mechanical industries	Transportation	Trade	Public service (not elsewhere classified)	Professional service	Domestic and personal service	Clerical occupations
United States . .	**8,549,611**	**1,084,128**	**2,864**	**1,930,341**	**213,054**	**667,792**	**21,794**	**1,016,498**	**2,186,924**	**1,426,116**
GEOGRAPHIC DIVISIONS:										
New England . .	871,015	8,102	10	379,171	16,635	55,164	1,298	87,748	168,266	154,621
Middle Atlantic	2,117,517	20,986	884	685,864	57,738	174,657	3,111	229,165	494,899	450,213
East North Central .	1,564,041	46,757	601	371,268	51,136	161,934	3,533	207,148	378,861	342,803
West North Central .	772,315	46,590	146	112,640	26,705	77,994	3,794	151,545	214,373	138,528
South Atlantic . . .	1,243,958	379,700	378	190,655	15,570	55,077	2,812	100,523	375,453	123,790
East South Central .	702,433	311,051	207	69,291	8,398	28,292	1,506	51,672	193,313	38,703
West South Central .	666,973	241,060	329	44,856	15,356	42,557	2,227	72,478	189,858	58,252
Mountain . . .	177,220	13,803	213	16,795	6,017	18,086	1,544	36,949	54,928	28,885
Pacific	434,039	16,079	96	59,801	15,499	54,031	1,969	79,270	116,973	90,321

3. In which divisions was there the largest number and percentage of males engaged in each of the main occupations? Of females?

4. Find the percentage of the total of women workers found in each main occupation.

5. What variations are there in the occupations of women in the different geographic divisions?

The Age of Workers

What are the ages of those employed? This is an important social question because the answer indicates especially the extent to which the very young are employed. During the last ten years there has been a marked decrease in child labor. In 1910, 18.4 per cent of all children between 10 and 15 were gainfully employed; in 1920 only 8.5 per cent of such children were employed. This means that more than a million children were in school in 1920 preparing for life's work who would, if the conditions of ten years before prevailed, be employed. Child-labor and compulsory-education laws have brought this change about.

The change effects all classes of the population as shown in Table 38.

Examples

1. What percentage of children between 10 and 15 years of age was employed in 1910 and 1920?

2. What was the actual decrease in numbers employed? In percentage of children employed?

3. Which class of people showed the largest and smallest percentage of children in gainful employment?

4. Which class showed the greatest improvement between 1910 and 1920?

5. Discuss the advantages of the changes which have taken place.

6. What is likely to be the extent of child labor at the Census of 1930?

TABLE 38. — NUMBER OF CHILDREN 10 TO 15 YEARS OF AGE ENGAGED IN GAINFUL OCCUPATIONS, BY AGE AND POPULATION CLASSES, FOR THE UNITED STATES: 1920 AND 1910

CLASS OF POPULATION	CHILDREN 10 TO 15 YEARS OF AGE			
	1920		1910	
	Total Number	Engaged in Gainful Occupations	Total Number	Engaged in Gainful Occupations
Both sexes	**12,502,582**	**1,060,858**	**10,828,365**	**1,990,225**
Native white — Native parentage	7,576,827	527,176	6,322,926	1,022,561
Native white — Foreign or mixed parentage	3,020,339	175,060	2,669,259	265,245
Foreign-born white	413,261	38,692	433,515	62,997
Negro	1,450,996	317,231	1,362,821	634,938
Indian, Chinese, Japanese, and all other	41,150	2,690	39,844	4,484
Indian	35,503	2,359		
Chinese	2,411	158		
Japanese	3,067	169		
All other	178	13		

The distribution of child labor by states is set forth in the next table, which shows the number of girls and boys employed in each state and the corresponding number for 1920.

Examples

1. Arrange the states in the order of percentage of children in gainful employment.

2. Which has the largest percentage of boys at work?

3. Which has the largest percentage of girls at work?

4. What are the principal occupations of the states in which the largest number of children are employed?

TABLE 39. — OCCUPATIONS OF CHILDREN IN THE UNITED STATES, BY STATES: 1920 AND 1910

[U. S. Census Data]

DIVISION AND STATE	MALES 10 TO 15 YRS. OF AGE, 1920		MALES 10 TO 15 YRS. OF AGE, 1910		FEMALES 10 TO 15 YRS. OF AGE, 1920		FEMALES 10 TO 15 YRS. OF AGE, 1910	
	Total No.	No in Gainful Occup	Total No.	No in Gainful Occup.	Total No.	No in Gainful Occup	Total No.	No in Gainful Occup.
United States	6,294,985	714,248	5,464,228	1,353,139	6,207,597	346,610	5,364,137	637,086
NEW ENGLAND:								
Maine	41,486	1,853	38,826	3,710	41,343	732	38,454	1,716
New Hampshire	22,825	1,002	21,710	2,222	22,866	524	21,725	1,537
Vermont	19,638	935	19,107	1,967	18,941	342	18,541	598
Massachusetts	197,205	19,714	169,990	19,172	196,821	14,009	170,042	13,573
Rhode Island	31,346	4,476	28,095	4,350	32,393	4,093	28,299	3,726
Connecticut	71,722	6,488	57,034	6,675	71,545	5,071	56,825	4,693
MIDDLE ATLANTIC								
New York	532,343	29,382	466,895	39,357	527,292	20,464	467,191	25,737
New Jersey	170,747	14,196	136,309	14,948	170,438	11,828	135,993	10,844
Pennsylvania	498,750	33,453	424,564	64,007	498,166	22,218	422,043	32,888
EAST NORTH CENTRAL:								
Ohio	300,942	15,230	255,713	31,906	295,799	2,889	252,063	10,940
Indiana	163,834	12,428	154,238	27,688	160,145	4,483	150,889	6,005
Illinois	351,552	23,870	311,761	41,912	347,758	13,063	309,401	14,598
Michigan	194,494	9,891	155,502	14,512	189,719	3,263	152,193	4,781
Wisconsin	155,746	10,982	148,401	16,985	152,722	4,702	145,206	6,913
WEST NORTH CENTRAL:								
Minnesota	140,111	6,528	129,031	14,707	137,417	1,743	125,902	3,657
Iowa	136,380	7,481	134,077	20,777	133,837	1,640	131,631	3,608
Missouri	199,657	16,893	195,183	44,373	190,025	5,694	192,136	8,329
North Dakota	44,613	2,215	35,848	5,929	43,270	601	34,148	1,423
South Dakota	39,830	2,138	36,521	6,953	38,597	417	34,672	1,256
Nebraska	78,981	4,366	73,615	10,865	76,939	920	71,826	1,439
Kansas	106,417	6,224	101,656	16,997	105,289	1,046	99,138	1,733
SOUTH ATLANTIC.								
Delaware	12,008	952	11,826	2,753	11,801	454	11,259	903
Maryland	82,847	8,255	77,358	16,336	81,699	4,045	76,730	7,831
District of Columbia	17,149	1,272	14,405	913	18,081	599	15,060	432
Virginia	157,364	19,931	142 317	47,204	154,551	5,562	138,920	14,675
West Virginia	96,362	5,979	79,343	20,548	94,937	1,452	75,658	3,254
North Carolina	188,538	40,945	159,276	91,649	184,946	21,217	155,495	52,983
South Carolina	130,337	37,411	114,019	66,382	129,867	26,109	112,093	50,870
Georgia	215,008	58,761	189,378	101,648	212,227	30,173	183,323	59,941
Florida	61,924	7,924	47,724	17,096	61,928	2,940	47,041	7,828
EAST SOUTH CENTRAL:								
Kentucky	161,285	22,550	152,511	53,838	157,123	4,204	148,441	10,854
Tennessee	164,155	30,670	147,323	64,035	159,393	9,167	141,992	19,921
Alabama	175,571	53,844	152,170	94,126	173,966	30,553	146,795	60,586
Mississippi	139,770	44,711	131,833	83,256	136,012	25,643	127,525	55,274
WEST SOUTH CENTRAL:								
Arkansas	130,853	32,092	107,875	60,109	128,740	16,048	105,917	32,341
Louisiana	128,369	21,928	114,766	38,830	129,683	10,346	114,171	20,902
Oklahoma	147,067	17,079	112,344	35,383	142,466	5,902	107,760	10,728
Texas	324,739	54,531	274,522	114,443	317,847	26,341	266,745	59,937

TABLE 39. — OCCUPATIONS OF CHILDREN IN THE UNITED STATES, BY STATES: 1920 AND 1910 — *Continued*

[U. S. Census Data]

DIVISION AND STATE	MALES 10 TO 15 YRS. OF AGE, 1920		MALES 10 TO 15 YRS. OF AGE, 1910		FEMALES 10 TO 15 YRS. OF AGE, 1920		FEMALES 10 TO 15 YRS. OF AGE, 1910	
	Total No.	No. in Gainful Occup.	Total No.	No. in Gainful Occup.	Total No.	No. in Gainful Occup	Total No.	No. in Gainful Occup.
MOUNTAIN:								
Montana	30,450	1,165	17,894	1,448	29,595	237	17,330	316
Idaho	27,823	1,421	19,526	2,424	26,818	187	18,249	274
Wyoming	10,509	513	6,511	755	9,878	95	6,243	111
Colorado	52,681	3,615	41,983	4,683	52,109	943	40,988	1,181
New Mexico	24,082	1,729	20,811	4,942	23,950	466	20,020	864
Arizona	19,318	1,810	11,166	1,297	18,960	901	10,369	376
Utah	30,564	2,126	23,897	2,811	30,111	235	23,406	420
Nevada	3,444	136	3,022	235	3,271	33	2,805	51
PACIFIC:								
Washington	69,714	3,836	56,392	4,424	68,931	814	54,930	1,042
Oregon	41,134	2,088	33,959	2,970	40,366	374	32,800	535
California	153,301	7,229	106,001	8,589	151,019	1,828	103,754	2,662

The years of greatest working activity are disclosed by a careful study of the next table, which brings out the proportion of workers at all ages according to the occupation in which they engage.

Examples

1. In which occupations do women engage most extensively at different ages?

2. In which occupations do children under 15 years of each sex engage most extensively?

3. At what age do we find most of the farmers, the professional workers, miners, etc.?

4. Note the small number of workers over 65 years in certain occupations. Point out the significance.

5. What percentage of women workers are in each age group? How do these figures compare with those of the male workers?

6. Find the percentage of people in each age group engaged in gainful occupations; of males; of females. (For number of people and of males and females in each age group see page 21.)

TABLE 40. — NUMBER AND PERCENTAGE OF DISTRIBUTION, BY AGE, PERIODS, OF MALES AND OF FEMALES ENGAGED IN EACH GENERAL DIVISION OF OCCUPATIONS, FOR THE UNITED STATES: 1920

SEX AND AGE PERIODS	ALL OCCUPATIONS	AGRICULTURE, FORESTRY, AND ANIMAL HUSBANDRY	EXTRACTION OF MINERALS	MANUFACTURING AND MECHANICAL INDUSTRIES	TRANSPORTATION	TRADE	PUBLIC SERVICE (NOT ELSEWHERE CLASSIFIED)	PROFESSIONAL SERVICE	DOMESTIC AND PERSONAL SERVICE	CLERICAL OCCUPATIONS
	NUMBER									
Male	**33,064,737**	**9,869,030**	**1,087,359**	**10,888,183**	**2,850,528**	**3,575,187**	**748,666**	**1,127,391**	**1,217,968**	**1,700,425**
10 to 13 years	258,259	221,409	598	6,737	1,682	16,369	136	325	4,880	6,123
14 years	174,683	109,360	1,465	27,039	3,907	11,835	199	504	4,299	16,075
15 years	281,306	128,469	4,982	70,559	10,028	21,030	750	1,150	6,903	37,435
16 years	501,134	186,368	19,639	162,781	23,844	36,044	2,428	2,294	11,218	56,518
17 years	602,322	210,116	23,267	203,434	37,145	43,576	8,405	3,480	13,170	59,729
18 and 19 years	1,443,968	457,588	54,024	475,401	120,285	104,222	50,993	17,792	32,940	130,723
20 to 24 years	4,121,392	1,134,649	143,920	1,395,784	404,352	372,471	114,931	106,632	112,716	335,937
25 to 44 years	15,579,586	3,966,116	577,472	5,461,425	1,503,895	1,799,041	306,491	605,682	603,619	755,845
45 to 64 years	8,552,175	2,783,518	236,137	2,685,508	661,331	1,020,408	214,156	328,893	357,849	264,285
65 and over	1,492,837	662,046	22,356	378,673	76,619	144,500	47,415	58,614	66,685	35,929
Age unknown	57,075	9,391	3,499	20,842	7,440	5,601	2,762	2,025	3,689	1,826
Female	**8,549,511**	**1,084,128**	**2,864**	**1,930,341**	**213,054**	**667,792**	**21,794**	**1,016,498**	**2,186,924**	**1,426,116**
10 to 13 years	119,804	107,549	49	2,736	217	844	17	296	7,292	804
14 years	82,911	41,617	34	23,473	455	3,009	9	298	10,182	3,834
15 years	143,895	38,905	63	54,793	2,623	10,281	19	892	20,450	15,869
16 years	277,823	43,923	133	107,822	10,876	24,712	37	2,820	39,780	47,720
17 years	331,369	37,504	171	113,476	16,520	30,330	57	8,629	48,368	76,314
18 and 19 years	802,235	71,497	299	214,340	39,966	67,744	547	69,450	118,729	219,663
20 to 24 years	1,809,075	130,790	510	382,765	70,702	138,915	2,929	298,827	302,226	481,411
25 to 44 years	3,417,373	337,087	1,125	730,250	63,266	291,658	12,096	490,894	972,489	518,508
45 to 64 years	1,352,479	219,802	405	271,047	7,660	91,725	5,554	130,500	568,448	570,338
65 and over	196,000	54,356	66	26,986	547	7,408	471	10,976	93,135	2,955
Age unknown	15,647	1,098	9	2,653	222	1,166	57	2,016	5,825	1,700

Married Women in Employment

Another social problem of occupations is the extent to which married women engage in employment, perhaps to the neglect of their homes and children. The facts for the last thirty years are as follows: In 1890 there were only 4.6 per cent of married women employed; in 1900 this had risen to 5.6 per cent, in 1910 to 10.7 per cent, and in 1920 to 9.0 per cent. The increase in married women in employment up to 1910 was quite marked, but a reduction of nearly 2 per cent took place in the following ten-year period. This was probably due to the greater prosperity of the later year which enabled more men to earn a comfortable living without the necessity of work on the part of their wives.

Workers in Manufactures

There were employed in manufacturing in 1919 the large total of 10,812,736 persons, or more than a fourth of all the people gainfully employed in 1920. The number of people so employed increased rapidly between 1904 and 1919 as shown by the census of manufactures taken every five years. There were 6,213,612 persons employed in manufactures in 1904; 7,678,578 in 1909; and 8,263,063 in 1914. The greatest increase coincided with the war period when manufactures expanded greatly.

Table 41. — Classification of People Engaged in Manufactures: 1904–1919

	1904	1909	1914	1919	1924
Proprietors and firm members . . .	225,673	273,265	262,599	269,137	
Salaried employees .	519,556	790,267	964,217	1,447,227	
Wage earners . . .	5,468,383	6,615,046	7,036,247	9,096,372	

The persons engaged in manufactures were classified as proprietors and firm members, salaried employees, and wage earners.

When one thinks of manufacturing plants, it is of large establishments, but not all nor even a majority of the wage earners are in large plants. The following facts are interesting and significant.

TABLE 42. — SIZE OF PLANT ACCORDING TO AVERAGE NUMBER OF WAGE EARNERS

	NUMBER OF PLANTS	NUMBER WORKERS
No wage earners	37,934	
1 to 5 wage earners	141,742	311,576
6 to 20 wage earners	56,208	631,290
21 to 50 wage earners	25,379	829,301
51 to 100 wage earners	12,405	888,344
101 to 250 wage earners	10,068	1,581,763
251 to 500 wage earners	3,599	1,250,875
500 to 1000 wage earners	1,749	1,205,627
1000 and over wage earners	1,021	2,397,596

Examples

1. Which plants had the greatest increase in numbers between 1914 and 1919?
2. What percentage of all plants was there of each size?
3. What percentage of all persons employed in manufacturing was employed in each group in 1914 and 1919?
4. Which group had the largest increase in percentage of workers?
5. What was the number of plants and of employers in each division according to the latest census?

AGRICULTURAL WORKERS

The second largest number of employed persons is found in agriculture. The total number engaged in all branches

of agriculture in 1920 was 10,953,158. This was a decline from 12,659,082 so engaged in 1910, the bulk of the decline being found among farm laborers who decreased in number from 6,069,321 in 1910 to 4,041,627 in 1920. Some of this decline was due to the change of census date from April to January. A large part of farm labor being seasonal, such labor would not be engaged in the month of January so fully as in April. A large part of the decline was due to the shifting to the city as a result of the war and the demands of war industries.

TABLE 43. — PERSONS ENGAGED IN FARMING: 1920 AND 1910

CLASSIFICATION	1920	1910
Farmers, dairy farmers, and stock raisers	6,201,261	5,979,340
Laborers on above farms	4,041,627	6,069,321
Foremen	93,048	51,195
Fishermen and oystermen	52,836	68,275
Foresters and rangers	3,653	4,332
Gardeners, florists, fruit growers, and nurserymen	169,390	139,255
Gardeners, florists, etc., laborers	137,010	1,339,927
Lumbermen and woodchoppers	205,315	161,268
Owners of log and timber camps	8,410	7,931
Apiarists	2,893	2,145
Poultry raisers	14,116	12,151
Poultry farm laborers	4,599	3,233
All others	18,991	26,709

MINING

The mining industry is another basic industry of the country upon which the welfare and even the life of the people depend. This industry employs a total of 1,077,675, of whom 12,624 are women.

There was not a marked increase in the number of persons engaged in mining between 1909 and 1919, due to

the use of labor-saving machinery. In the former year there were 1,041,682 workers, of whom 967,633 were wage earners. The number of wage earners was 581,728 in 1902 and 536,043 in 1889.

TABLE 44. — PERSONS ENGAGED IN MINING ENTERPRISES: 1919

CLASS	TOTAL	MALE	FEMALE
All classes	**1,077,675**	**1,006,551**	**12,624**
Proprietors and officials	60,409	58,330	2,079
Proprietors and firm members	21,918	20,231	1,687
Salaried officers of corporations	10,456	10,202	254
Superintendents and managers	21,704	21,648	56
Technical employees	6,331	6,249	82
Clerks and other subordinate salaried employees	35,706	25,649	10,057
Wage earners (average number)	981,560	981,072	488
Wage earners 16 years of age and over	981,361	980,873	488
Wage earners under 16 years of age	199	190	

The size of the mining enterprises according to average number of wage earners is given for all classes of mining work. It will be seen here also that a very considerable number of workers are in mines where fewer than 100 men are employed, and a great majority work where fewer than 500 men are employed. A study of additional tables shows that the greater part of the anthracite miners are in mines employing more than 1000 men, while in bituminous mining about half of the miners are found in mines having from 100 to 500 wage earners.

Examples

1. Compare the number of miners in each class of establishment.
2. What percentage of those engaged in mining were wage earners in 1919 and in 1909?

TABLE 45. — SIZE OF PRODUCING ENTERPRISES, BY AVERAGE NUMBER OF WAGE EARNERS: 1919

INDUSTRY AND WAGE EARNERS PER ENTERPRISE	ENTERPRISES	WAGE EARNERS
	Number	Average number
All industries	**21,280**	**981,560**
No wage earners	3,722	
1 to 5	7,912	16,761
6 to 20	3,948	44,506
21 to 50	2,309	76,040
51 to 100	1,372	98,621
101 to 500	1,743	377,339
501 to 1,000	182	125,278
Over 1,000	92	243,015

RAILWAY EMPLOYEES

The number of persons employed in running the principal railroads in 1922 was 1,645,244. This was more than twice as many as were employed in 1895. Table 46 shows the number employed in selected years since 1895:

TABLE 46. — RAILWAY EMPLOYEES IN SELECTED YEARS: 1895–1922

1895	785,034	1917	1,732,876
1900	1,017,653	1920	2,022,832
1905	1,382,196	1922	1,645,244
1910	1,699,420	1924	
1915	1,491,849	1926	

Examples

1. What percentage of all the people were employed on the railways at each census 1900, 1910, and 1920?

2. Why did the number of railway employers increase between 1917 and 1920 and then decrease?

3. Secure data for later years from annual report of the Interstate Commerce Commission or from the *Statistical Abstract of the United States.*

Some Marked Changes in Occupations: 1910–1920

The changes indicated may be accounted for by a cursory view of modern development. The rise of new industries and trades and the decadence of others is an easily observed phenomenon.

Table 47. — Some Marked Changes in Occupations: 1910–1920

	1920	1910
Blacksmiths	195,255	232,957
Brick and stone masons	131,264	169,402
Electricians	212,964	120,241
Glass blowers	9,144	15,564
Paper hangers	18,746	25,577
Harness and saddle industry	18,135	22,650
Paper and pulp mills	54,669	36,383
Rubber factories	86,204	31,593
Chauffeurs	285,045	45,785
Bankers	161,613	105,804
Chemists, etc.	32,941	16,273
Trained nurses	149,128	82,327
Bartenders	26,085	101,234
Saloon keepers	17,835	68,215

Examples

1. Account for the changes in each occupation listed above.

2. Turn to the complete list of occupations in the *Abstract of the Fourteenth Census* and study other marked changes.

3. Why do some occupations remain comparatively stable, as, for instance, barbers, physicians, lawyers?

4. How many in each occupation listed above are there to each thousand of population?

5. How many in each occupation above are there in your state for each thousand of population?

6. What occupations have an excessive proportion of workers in your own community?

Sources for Research

The sources for research are similar to those for the preceding chapter; namely, *Abstract of the Fourteenth Census*, *Statistical Abstract of the United States*, the New York *World Almanac*, and the Chicago *Daily News Almanac*. In addition there is the extensive volume of the Fourteenth Census on *Occupations*, which gives in detail the distribution of workers in the various occupations by cities and states.

PART II

PRODUCTION AND GENERAL WELFARE

CHAPTER V

SOCIETY AND PRODUCTION

More than 40 per cent of the entire population of the United States is engaged in gainful work. This vast army of workers is producing or distributing goods or performing services to provide for human wants. Some people are engaged in agriculture and produce goods from the soil; some are engaged in manufacturing and prepare from raw materials a finished product or one that may be used in further manufacturing; some are engaged in mining and produce mineral products from the stores of nature; some are engaged in the business of transporting, storing, and selling goods, and in the many related occupations; and some are engaged in the giving of professional, personal, or public services for the needs of man.

We shall be concerned in this chapter with the measurement of the principal productive processes which we depend upon for living. The four greatest of these are agriculture (including forestry), manufacturing, mining, and transportation. These are all basic industries, since they make possible the securing of the necessities and comforts of life. The products of these enterprises are regularly measured by public agencies, and from the figures gathered we are able to get a picture of the larger part of the work by which we live.

Agricultural Production

The Department of Agriculture gathers annually the statistics of crop acreage, crop production, and values of farm products, and keeps such close accounts of farm production that estimates are made every month of the acreage and condition of crops. These facts, by giving a true picture of the food supply, serve to stabilize prices and prevent wide fluctuation from panicky reports of crop excesses or crop failures spread by speculators who strive to raise or lower prices by rumors of crop conditions.

The Department of Agriculture presents annually tables showing the total values produced on the farm. The next table gives the facts for a period of twenty-four years.

Table 48. — Wealth Production on Farms: 1899–1922

[Sources: Bureau of the Census, Department of Commerce, and Department of Agriculture]

CALENDAR YEAR	VALUE OF CROPS PRODUCED	VALUE OF LIVESTOCK PRODUCTS	CALENDAR YEAR	VALUE OF CROPS PRODUCED	VALUE OF LIVESTOCK PRODUCTS
	Thousand dollars	*Thousand dollars*		*Thousand dollars*	*Thousand dollars*
1899	2,998,704	1,718,366	1914	6,111,684	3,783,277
1900	3,191,942	1,817,653	1915	6,907,187	3,868,304
1901	3,385,179	1,916,941	1916	9,054,459	4,351,905
1902	3,578,416	2,016,229	1917	13,479,000	5,852,000
1903	3,771,654	2,115,516	1918	14,331,000	8,149,000
1904	3,981,676	2,140,102	1919	15,422,600	8,360,600
1905	4,012,653	2,261,344	1920	10,909,300	7,354,200
1906	4,263,134	2,501,076	1921	6,934,000	5,468,800
1907	4,761,112	2,726,877	1922	8,961,000	5,349,000
1908	5,098,293	2,792,333	1923		
1909	5,487,161	3,011,150	1924		
1910	5,486,374	3,551,017	1925		
1911	5,562,058	3,257,117	1926		
1912	5,842,220	3,500,570	1927		
1913	6,132,759	3,716,754			

In analyzing this table it should be observed that the wide differences in totals are due principally to differences

in prices rather than in the amounts produced. In considering the totals of value of farm products and livestock it should be noted that a considerable part of the value of crops was fed on the farms to produce livestock, hence the sum of the two values is greater than the actual returns to the farmers.

Examples

1. What was the per capita wealth production of farm crops for 1910 and 1920? Of livestock?
2. What was the wealth production per farm in 1910 and 1920?
3. Secure the data for later years.

Production of Principal Farm Products

The measurement of specific crops by the U. S. Department of Agriculture gives the production by states, the acreage, and the values. These offer opportunities to compare the total production, the average production per acre, and the price for the product on the farm.

In a series of charts following is displayed the production of the leading farm products for the whole country and for the ten leading states for each product in 1909 and 1919. In this condensed form the distribution of products by states is set forth and the trend of crop production is displayed.

Examples

1. Make a chart similar to Figure 17 for the latest year for which data are available.
2. Make a chart similar to Figure 18, showing farm expenditures for labor for the latest year.
3. Make charts similar to Figures 19 to 28 for the latest year for which data are available.

Value of All Farm Crops, by States: 1919 and 1909

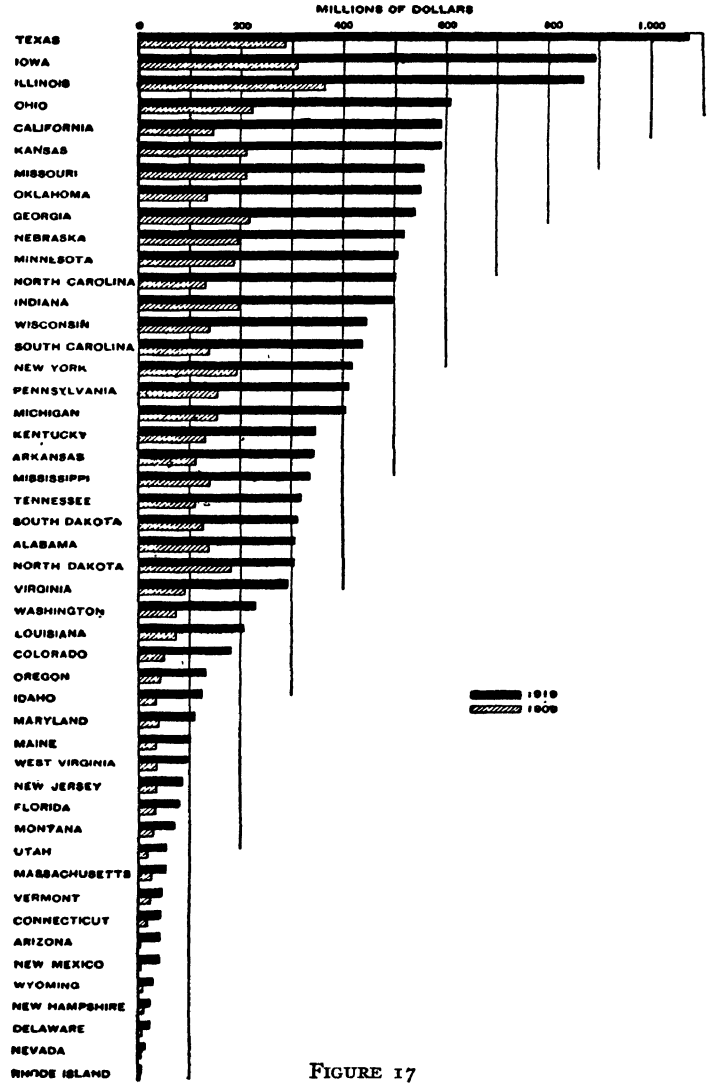


Figure 17

Farm Expenditures for Labor, by States: 1919 and 1909

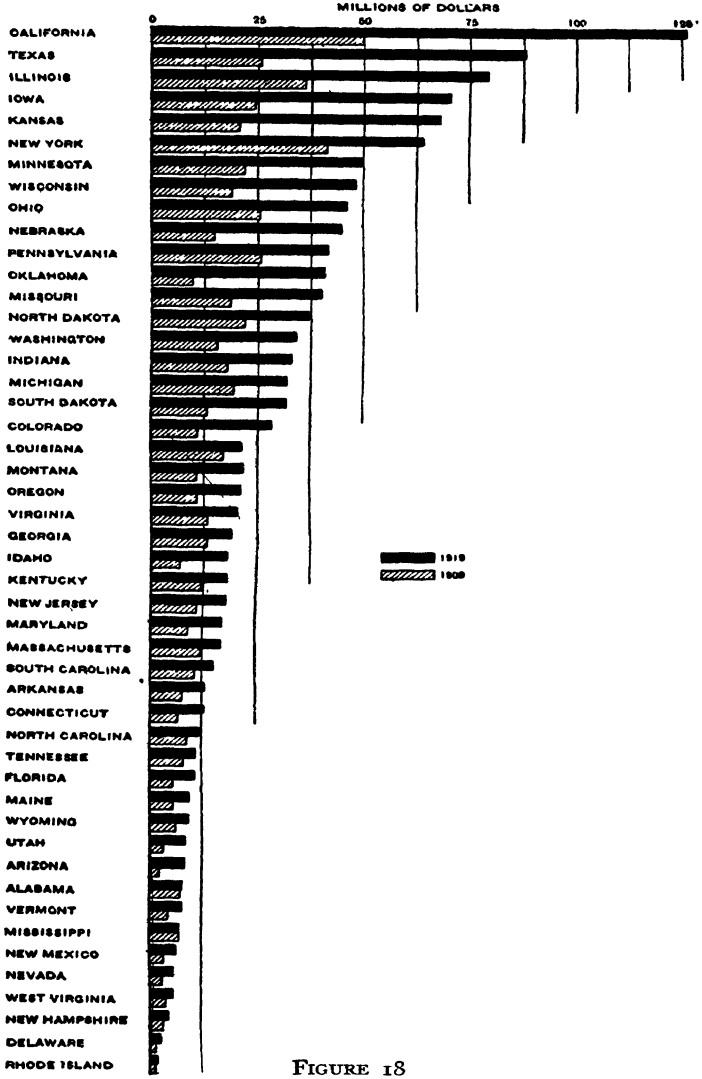
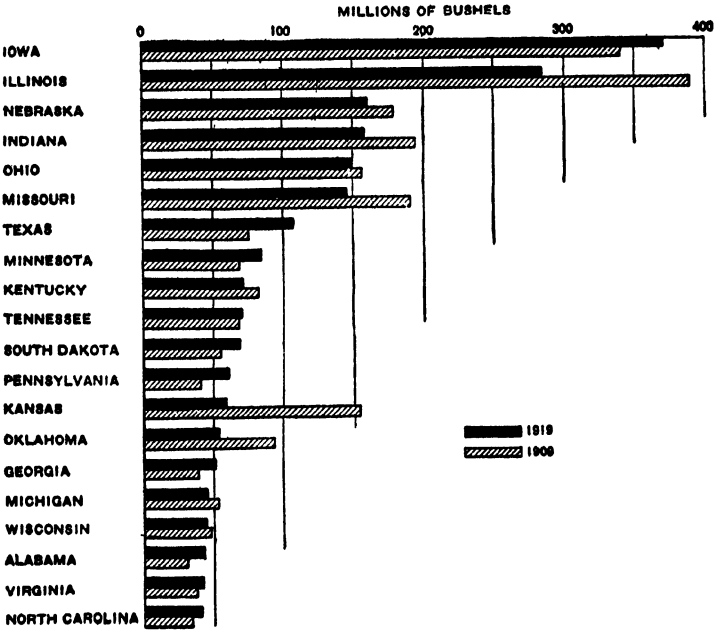


Figure 18

Production of Corn, 20 Leading States: 1919 and 1909



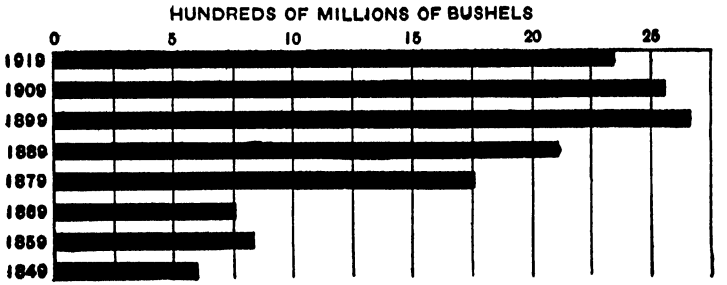
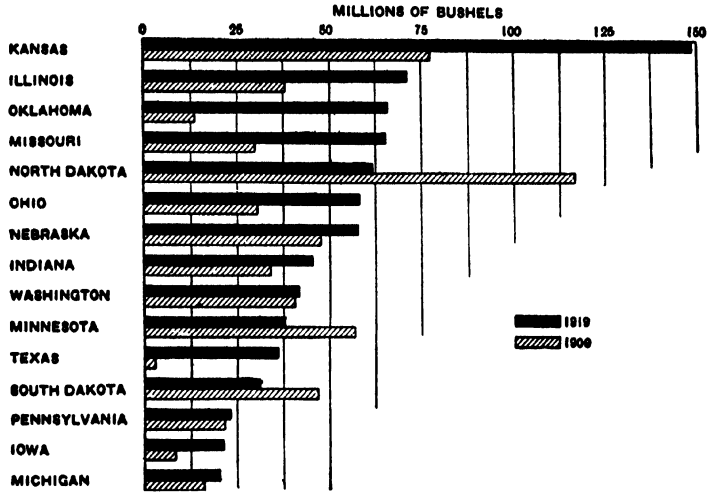


Figure 19

Production of Wheat, 15 Leading States: 1919 and 1909



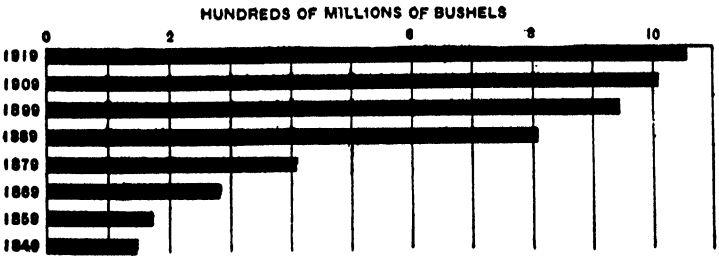


FIGURE 20

Production of Oats, 15 Leading States: 1919 and 1909

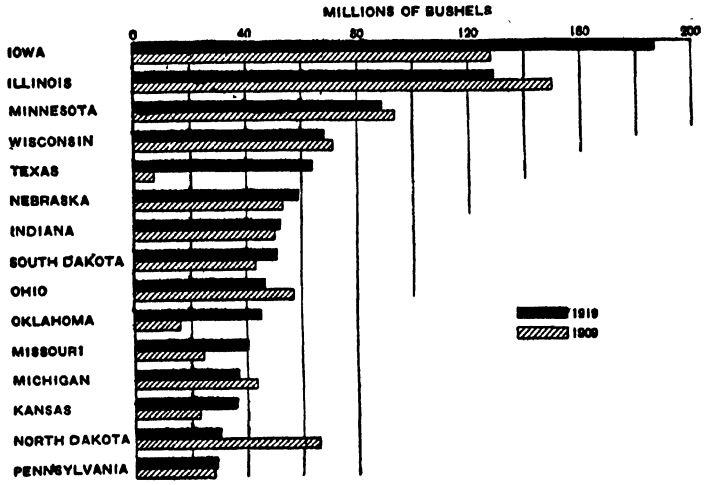


Figure 21

Production of Rye, 10 Leading States: 1919 and 1909

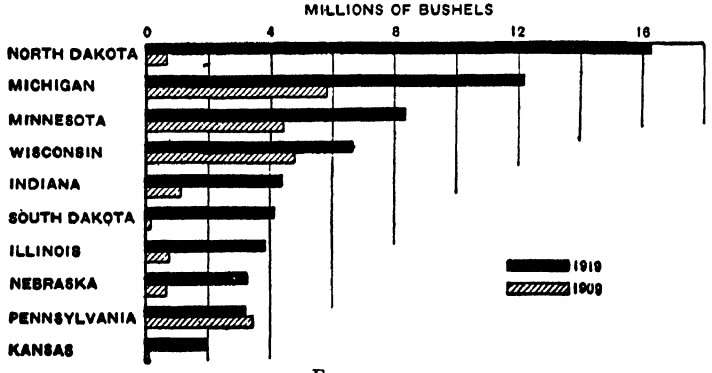


Figure 22

Production of Barley, 10 Leading States: 1919 and 1909

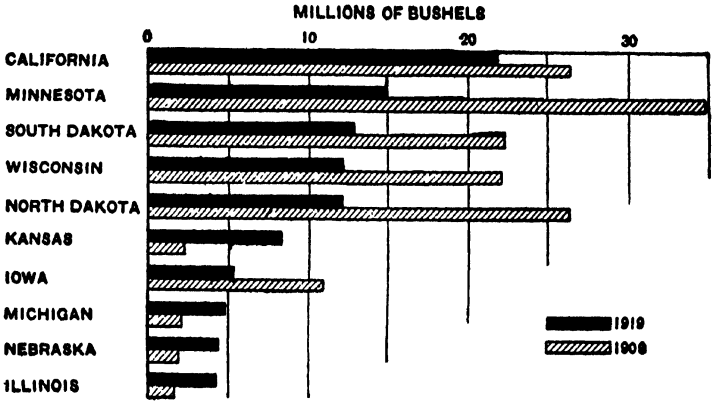


Figure 23

Value of Vegetables Raised for Sale, 12 Leading States: 1919

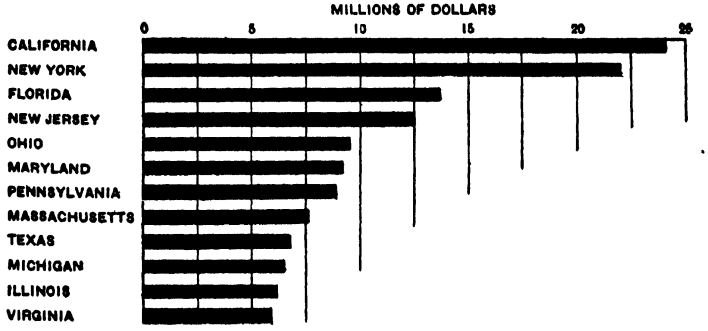


Figure 24

PRODUCTION OF POTATOES, 20 LEADING STATES: 1919 AND 1909

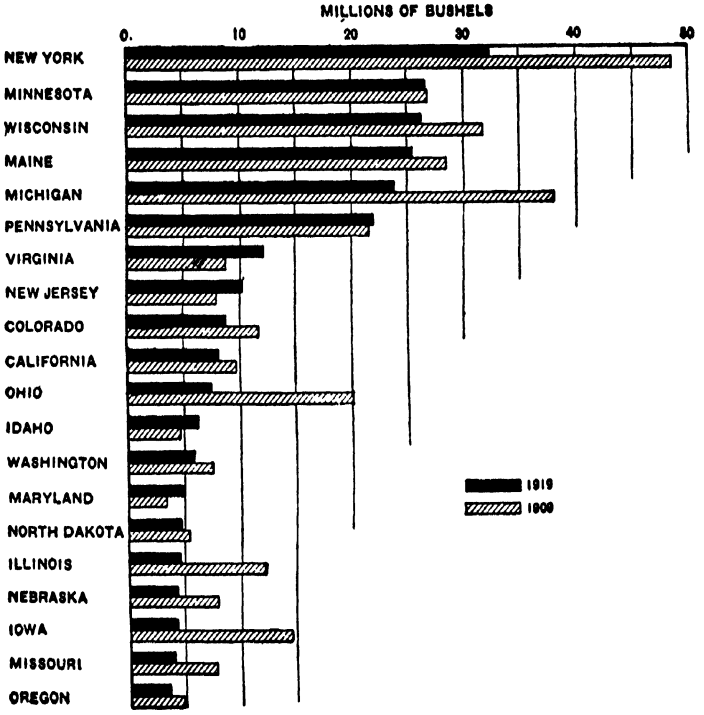


FIGURE 25

Production of Sweet Potatoes, 15 Leading States: 1919 and 1909

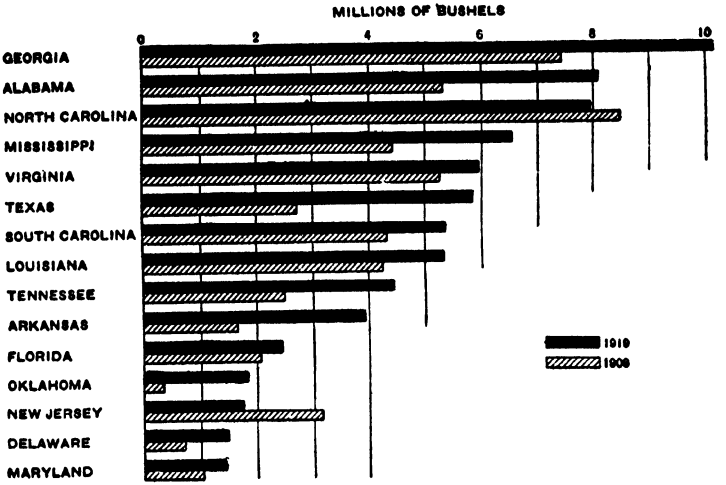
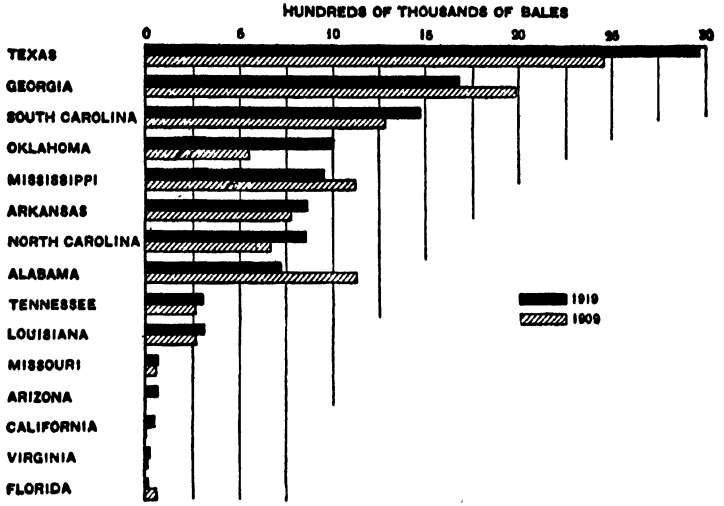


Figure 26

Production of Cotton, 15 Leading States: 1919 and 1909



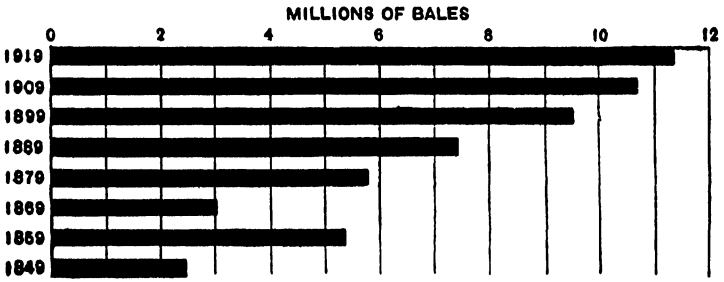
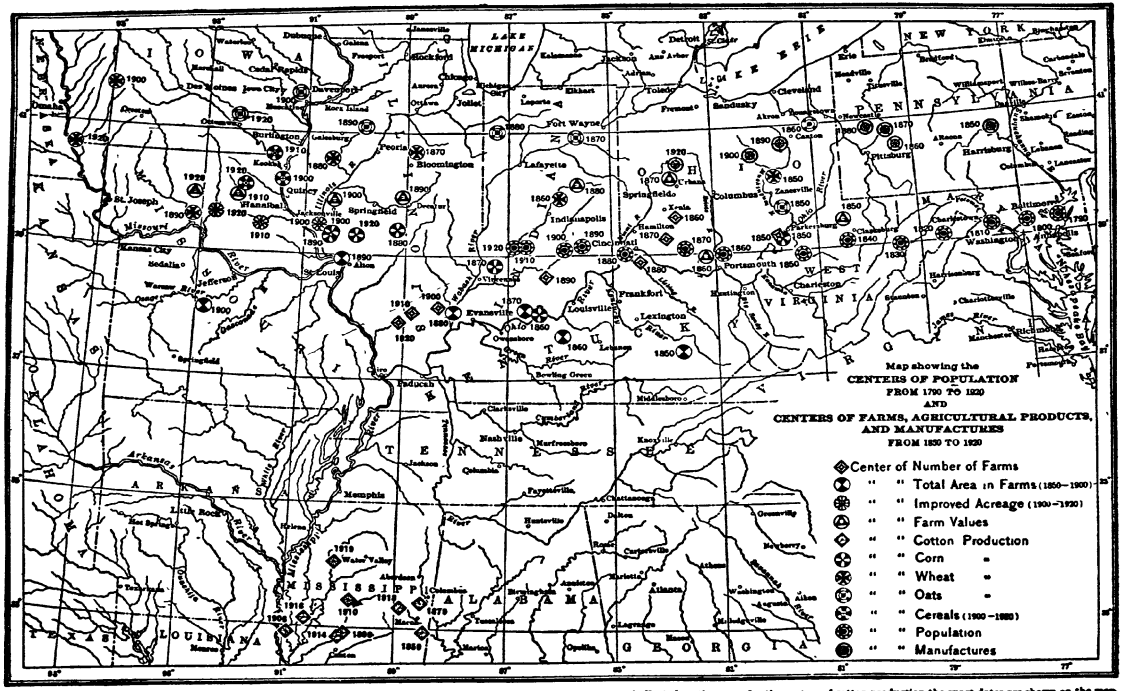


Figure 27



NOTE.—The centers for manufactures and for all crops except cotton are based on data for the year preceding the census year indicated on the map, for the centers of cotton production the exact dates are shown on the map.

FIGURE 28

TABLE 49. — PRODUCTION OF PRINCIPAL CROPS: 1866–1922

(a) *Production of Corn:* 1866–1922

YEAR	ACREAGE	AVERAGE YIELD PER ACRE	PRODUCTION	AVERAGE FARM PRICE PER BUSHEL DEC. 1	FARM VALUE DEC. 1
	1,000 acres	*Bushels*	*1,000 bushels*	*Cents*	*1,000 dollars*
1866–1875	37,216	26.1	969,948	46.9	454,535
1876–1885	61,671	25.4	1,564,992	39.5	617,780
1886–1895	74,274	23.8	1,769,616	36.7	648,785
1900	95,042	26.4	2,505,148	35.1	878,243
1905	93,573	29.4	2,748,949	40.8	1,120,513
1910	104,035	27.7	2,886,260	48.0	1,384,817
1911	105,825	23.9	2,531,488	61.8	1,565,258
1912	107,083	29.2	3,124,746	48.7	1,520,454
1913	105,820	23.1	2,446,988	69.1	1,692,092
1914	103,435	25.8	2,672,804	64.4	1,722,070
1915	106,197	28.2	2,994,793	57.5	1,722,680
1916	105,296	24.4	2,566,927	88.9	2,280,729
1917	116,730	26.3	3,065,233	127.9	3,920,228
1918	104,467	24.0	2,502,665	136.5	3,416,240
1919	97,170	28.9	2,811,302	134.5	3,780,597
1920	101,699	31.5	3,208,584	67.0	2,150,332
1921	103,740	29.6	3,068,569	42.3	1,297,213
1922	102,428	28.2	2,890,712	65.7	1,900,287
1923					
1924					
1925					
1926					
1927					

Examples

1. What has been the trend of the production of corn per acre from 1866 to 1922?

2. Which has varied most — the production per acre, the total production, the price per bushel, or the acreage?

3. Account for the wide fluctuations in prices.

4. Secure data for later years and bring this table down to date.

TABLE 49 (*Continued*). — PRODUCTION OF PRINCIPAL CROPS: 1866–1922

(*b*) *Production of Wheat:* 1866–1922

YEAR	ACREAGE HARVESTED	AVERAGE YIELD PER ACRE	PRODUCTION	AVERAGE FARM PRICE PER BUSHEL DEC. 1	FARM VALUE DEC 1
	1,000 acres	*Bushels*	*1,000 bushels*	*Cents*	*1,000 dollars*
1866–1875	20,470	12.0	244,672	105.3	257,587
1876–1885	34,433	12.4	425,054	92.6	391,104
1886–1895	37,500	12.7	476,788	67.3	321,071
1900	51,387	11.7	602,708	62.0	373,578
1905	49,389	14.7	726,819	74.6	542,543
1910	45,681	13.9	635,121	88.3	561,051
1911	49,543	12.5	621,338	87.4	543,063
1912	45,814	15.9	730,267	76.0	555,280
1913	50,184	15.2	763,380	79.9	610,122
1914	53,541	16.6	891,017	98.6	878,680
1915	60,469	17.0	1,025,801	91.9	942,303
1916	52,316	12.2	636,318	160.3	1,019,968
1917	45,089	14.1	636,655	200.8	1,278,112
1918	59,181	15.6	921,438	204.2	1,881,826
1919	75,694	12.8	967,979	214.9	2,080,056
1920	61,143	13.6	833,027	143.7	1,197,263
1921	63,696	12.8	814,905	92.6	754,834
1922	61,230	14.0	856,211	100.9	864,139
1923					
1924					
1925					
1926					
1927					

Examples

1. Which has varied most — the acreage, average yield per acre, total production, or price, from 1866 to 1922?

2. What was the value produced per acre for years 1866 to 1922?

3. Account for the wide fluctuation of prices.

4. What remedies are planned to make wheat prices more stable?

TABLE 49 (*Continued*). — PRODUCTION OF PRINCIPAL CROPS: 1866–1922

(*c*) *Production of Potatoes:* 1866–1922

YEAR	ACREAGE	AVERAGE YIELD PER ACRE	PRODUCTION	AVERAGE FARM PRICE PER BUSHEL DEC. 1	FARM VALUE DEC. 1
	1,000 acres	*Bushels*	*1,000 bushels*	*Cents*	*1,000 dollars*
1849			65,798		
1859			111,149		
1866–1875	1,261	93.0	117,266	53.5	62,754
1876–1885	1,998	81.2	162,228	50.6	82,085
1886–1895	2,653	73.8	197,285	50.4	92,938
1900	2,987	82.9	247,759	42.3	104,764
1905	3,195	87.3	278,885	61.1	170,340
1910	3,720	93.8	349,032	55.7	194,566
1911	3,619	80.9	292,737	79.9	233,778
1912	3,711	113.4	420,647	50.5	212,550
1913	3,668	90.4	331,525	68.7	227,903
1914	3,711	110.5	409,921	48.7	199,460
1915	3,734	96.3	359,721	61.7	221,992
1916	3,565	80.5	286,953	146.1	419,333
1917	4,384	100.8	442,108	122.8	542,774
1918	4,295	95.9	411,860	119.3	491,527
1919	3,542	91.2	322,867	159.5	514,855
1920	3,657	110.3	403,296	114.5	461,778
1921	3,941	91.8	361,659	110.1	398,362
1922	4,331	104.2	451,185	58.2	262,608
1923					
1924					
1925					
1926					
1927					

Examples

1. What has been the trend in the production of potatoes per acre?
2. What has been the value per acre produced in each year from 1866 to 1922?
3. Which has varied most — the total product or the price?
4. Bring the table down to date.

TABLE 49 (*Continued*). — PRODUCTION OF PRINCIPAL CROPS: 1866–1922

(*d*) *Production of Cotton:* 1866–1922

YEAR	ACREAGE	AVERAGE YIELD PER ACRE	PRODUCTION	AVERAGE FARM PRICE PER POUND DEC. 1	FARM VALUE DEC. 1
	1,000 acres	*Pounds*	*1,000 bales*	*Cents*	*1,000 dollars*
1866–1875	8,810	176.2	3,250		
1876–1885	15,209	170.7	5,652	9.1	243,808
1886–1895	19,421	176.9	7,637	7.7	260,415
1900	24,933	194.4	10,123	9.2	463,310
1905	27,110	186.6	10,575	10.8	569,791
1910	32,403	170.7	11,609	14.1	820,407
1911	36,045	207.7	15,693	8.8	687,888
1912	34,283	190.9	13,703	11.9	817,055
1913	37,089	182.0	14,156	12.2	862,708
1914	36,832	209.2	16,135	6.8	549,036
1915	31,412	170.3	11,192	11.3	631,460
1916	34,985	156.6	11,450	19.6	1,122,295
1917	33,841	159.7	11,302	27.7	1,566,198
1918	36,008	159.6	12,041	27.6	1,663,633
1919	33,566	161.5	11,421	35.6	2,034,658
1920	35,878	178.4	13,440	13.9	933,658
1921	30,509	124.5	7,954	16.2	643,933
1922	33,742	141.6	9,964	23.8	1,192,461
1923					
1924					
1925					
1926					
1927					

Examples

1. Answer the questions for production of cotton as given under corn, wheat, and potatoes.

2. Which crop has had the most fluctuating prices?

3. In the *Yearbook of the U. S. Department of Agriculture* find the corresponding figures for oats, barley, buckwheat, rye, sugar, rice, apples, vegetables.

4. In the same source book find the average production per acre in each state for leading crops.

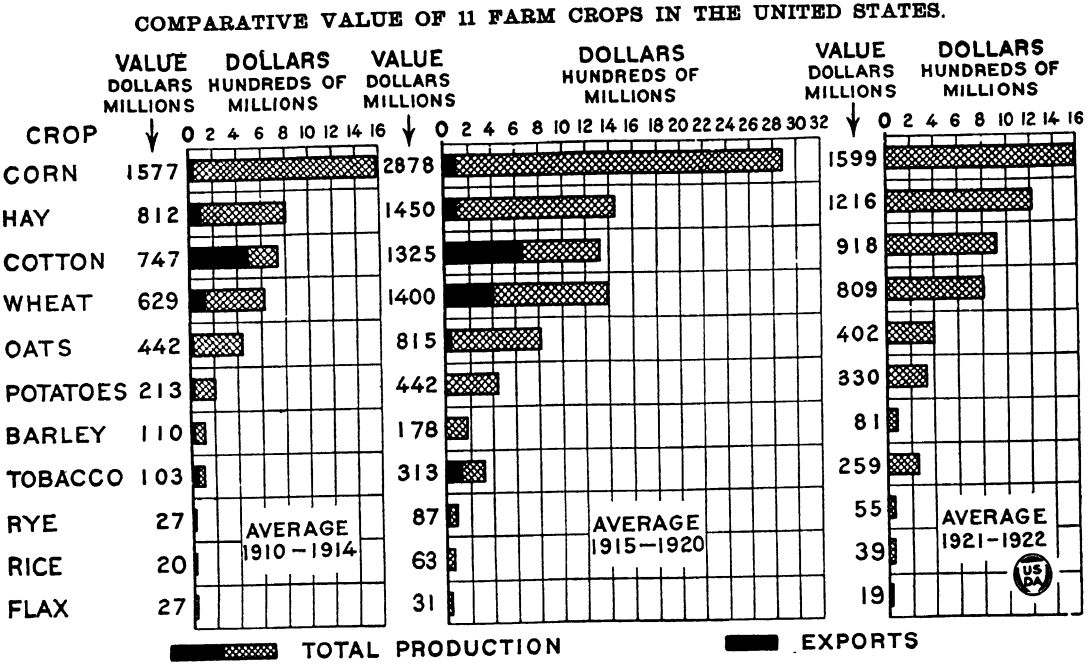

COMPARATIVE VALUE OF 11 FARM CROPS IN THE UNITED STATES.
VALUE DOLLARS MILLIONS
DOLLARS HUNDREDS OF MILLIONS
VALUE DOLLARS MILLIONS
DOLLARS HUNDREDS OF MILLIONS
VALUE DOLLARS MILLIONS
DOLLARS HUNDREDS OF MILLIONS
CROP
0 2 4 6 8 10 12 14 16
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32
0 2 4 6 8 10 12 14 16
CORN 1577 2878 1599
HAY 812 1450 1216
COTTON 747 1325 918
WHEAT 629 1400 809
OATS 442 815 402
POTATOES 213 442 330
BARLEY 110 178 81
TOBACCO 103 313 259
RYE 27 87 55
RICE 20 63 39
FLAX 27 31 19
AVERAGE 1910–1914
AVERAGE 1915–1920
AVERAGE 1921–1922
USDA
TOTAL PRODUCTION
EXPORTS

FIGURE 29

TABLE 50. — PRODUCTION OF LUMBER: 1909–1921

YEAR	THOUSANDS OF FEET	VALUE PER THOUSAND
1909	44,509,761,000	15.38
1915	37,011,656,000	14.04
1920	33,798,800,000	38.42
1921	26,960,864,000	23.47
1922		
1923		
1924		
1925		
1926		
1927		

Besides these forest products there were large values created in such products as turpentine, rosin, tar, and wood pulp.[1] In 1922 production of wood pulp amounted to 3,521,000 tons; of turpentine to 23,254,000 gallons; and of rosin to 1,652,000 barrels. A considerable foreign trade in each of these products is recorded.

Examples

1. Find the total value of lumber in each year above.
2. What is the probable cause for the decrease in lumber production?
3. Secure the data for lumber production for the years since 1921, and bring Table 50 down to date.
4. Find the latest figures in the *Yearbook of the U. S. Department of Agriculture* of the production of turpentine, rosin, and wood pulp.
5. In the same source book find the values that have thus been created.
6. Secure data from the same source to show the international trade in each of these products.

[1] For further details on forestry see Chapter IX on "Natural Resources."

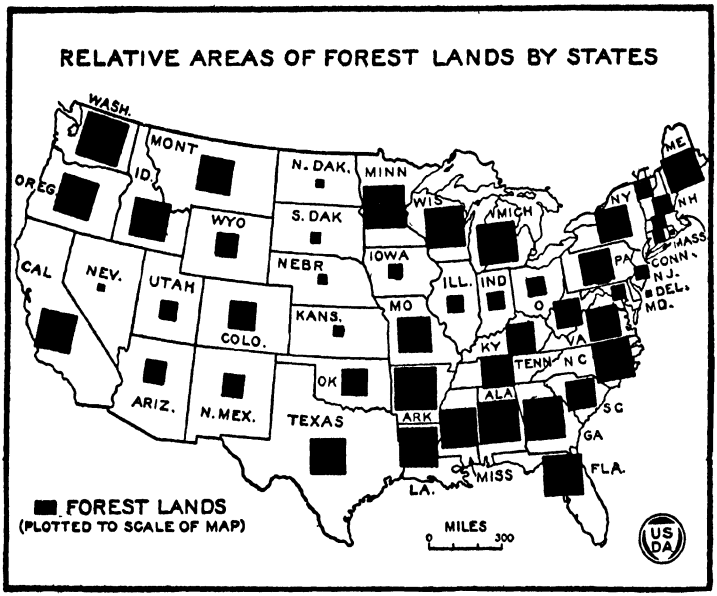


FIGURE 30

MANUFACTURES

The U. S. Census Bureau takes a census of manufactures every two years, showing by class of products the number of establishments, the number of employees, raw materials used, the values added by manufactures, and similar facts. Prior to 1921 this census was taken every five years.

The picture of manufactures taken by the Census Bureau for four successive censuses is given in the next brief table. This table shows a total of more than sixty-two billion dollars' worth of products in 1919, of which over twenty-five billion was added by the process of manufacture. It required ten million eight hundred thousand workers to run the manufacturing industry.

TABLE 51. — COMPARATIVE SUMMARY OF MANUFACTURING INDUSTRIES: 1919, 1914, 1909, AND 1904

	1919	1914	1909	1904
Number of establishments	290,105	275,791	268,491	216,180
Persons engaged	10,812,736	8,263,063	7,678,578	6,213,612
Proprietors and firm members	269,137	262,599	273,265	225,673
Salaried employees	1,447,227	964,217	790,267	519,556
Wage earners (average number)	9,096,372	7,036,247	6,615,046	5,468,383
Primary horsepower	29,504,792	22,437,072	18,675,376	13,487,707
Capital	$44,466,593,771	$22,790,979,937	$18,428,269,706	$12,675,580,874
Salaries and wages	13,425,771,834	5,354,249,384	4,365,612,851	3,184,884,275
Salaries	2,892,371,494	1,275,916,951	938,574,967	574,439,322
Wages	10,533,400,340	4,078,332,433	3,427,037,884	2,610,444,953
Paid for contract work	464,403,700	198,876,826	178,645,635	145,322,516
Rent and taxes	2,291,412,446	582,039,665	457,883,110	131,964,825
Cost of materials	37,376,380,283	14,368,088,831	12,142,790,878	8,500,207,810
Value of products	62,418,078,773	24,246,434,724	20,672,051,870	14,793,902,563
Value added by manufacture	25,041,698,490	9,878,345,893	8,529,260,992	6,293,694,753

Examples

1. What was the percentage increase in wages, salaries, taxes and rents, cost of materials, and value added by manufacture?
2. What was the average annual value produced by each person?
3. How many dollars of capital were required for each dollar of products?
4. How much horse power was employed for each man yearly?
5. Secure similar figures from the census of manufactures of 1923.

The manufacturing industries were classified into fourteen main divisions, as shown in Table 51, together with information as to the number of establishments, wage earners, capital, wages, cost of materials, value of products, and value added by manufacture.

Examples

1. In which group was the greatest percentage of value added by manufacture in each year?
2. Which group produced the most value per man employed in 1919?
3. Which group increased fastest in number of employees and value of products from 1904 to 1919?

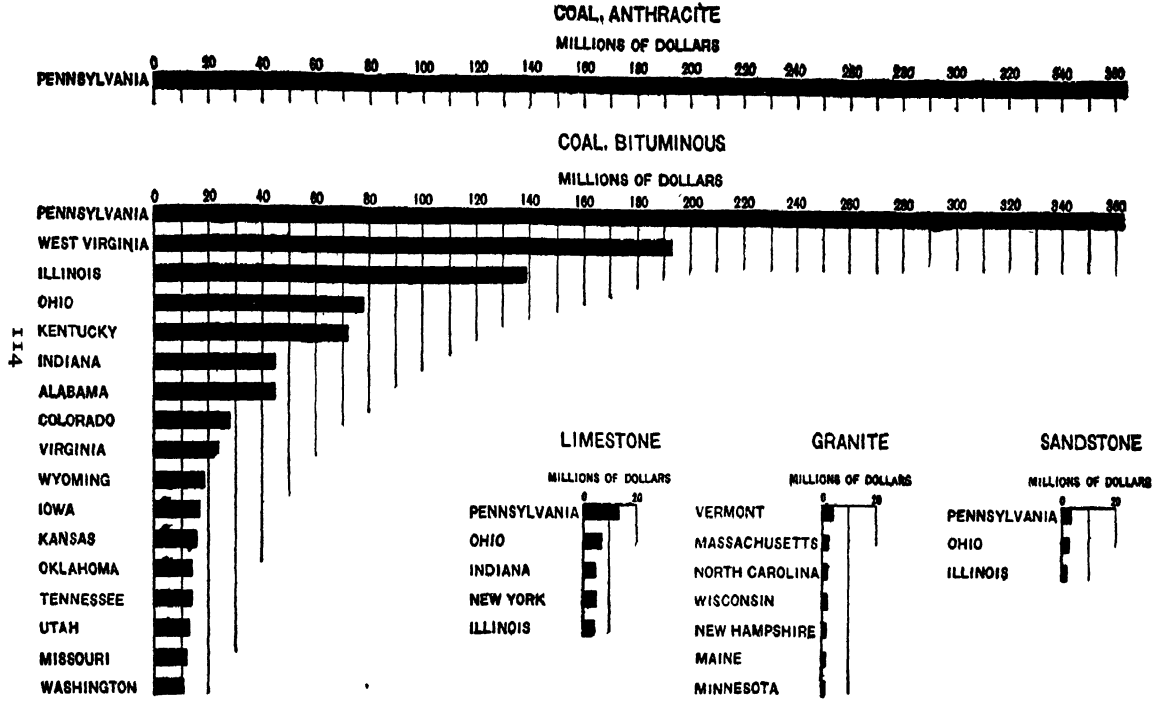
TABLE 52. — COMPARATIVE SUMMARY FOR 14 GENERAL GROUPS OF INDUSTRIES: 1919, 1914, 1909, AND 1904

[Dollars expressed in thousands]

GROUP	CENSUS YEAR	NUMBER OF ESTABLISHMENTS	WAGE EARNERS (AVERAGE NUMBER)	CAPITAL	WAGES	COST OF MATERIALS	VALUE OF PRODUCTS	VALUE ADDED BY MANUFACTURE
All industries	1919	290,105	9,096,372	$44,466,594	$10,533,400	$37,376,380	$62,418,079	$25,041,699
	1914	275,791	7,036,247	22,790,980	4,078,332	14,368,089	24,246,435	9,878,346
	1909	268,491	6,615,046	18,428,270	3,427,038	12,142,791	20,672,052	8,529,261
	1904	216,180	5,468,383	12,675,581	2,610,445	8,500,208	14,793,903	6,293,695
Food and kindred products	1919	61,312	684,672	4,615,150	722,540	10,111,547	12,438,891	2,327,344
	1914	59,317	496,234	2,174,386	278,009	3,828,512	4,816,710	988,198
	1909	55,364	411,575	1,696,754	208,663	3,187,803	3,937,618	749,815
	1904	45,857	354,046	1,169,873	164,511	2,306,121	2,845,556	539,435
Textiles and their products	1919	28,552	1,611,309	6,096,161	1,482,327	5,382,079	9,216,103	3,834,024
	1914	23,463	1,507,374	2,836,279	676,460	2,015,502	3,447,997	1,432,495
	1909	22,057	1,445,720	2,507,427	595,243	1,763,267	3,086,944	1,323,677
	1904	17,344	1,163,497	1,758,306	422,570	1,260,405	2,168,892	908,487
Iron and steel and their products	1919	20,120	1,585,712	8,711,843	2,193,203	4,815,885	9,403,634	4,587,749
	1914	17,719	1,061,058	4,281,998	723,163	1,762,312	3,223,142	1,460,830
	1909	17,292	1,026,553	3,578,602	635,323	1,799,943	3,164,471	1,364,528
	1904	14,431	868,634	2,351,051	488,598	1,190,793	2,199,776	1,008,983
Lumber and its remanufactures	1919	39,955	839,008	2,580,046	847,032	1,359,999	3,070,073	1,710,074
	1914	42,036	833,529	1,723,454	440,308	762,351	1,599,712	837,361
	1909	48,539	911,593	1,570,549	424,759	717,833	1,588,274	870,441
	1904	32,501	734,136	1,009,950	335,046	517,501	1,219,749	702,248
Leather and its finished products	1919	6,397	349,362	1,522,502	363,453	1,713,807	2,610,231	896,424
	1914	6,758	307,060	743,347	169,357	753,135	1,104,594	351,459
	1909	5,728	309,766	659,231	155,111	669,875	992,714	322,839
	1904	5,318	264,459	451,796	120,833	480,221	724,391	244,170
Paper and printing	1919	36,403	509,875	2,382,400	564,510	1,306,718	3,012,584	1,705,866
	1914	37,196	452,900	1,433,177	296,492	580,717	1,456,047	875,330
	1909	34,828	415,990	1,133,618	242,062	451,238	1,179,285	728,047
	1904	30,803	351,640	803,663	186,422	309,012	859,814	550,802
Liquors and beverages	1919	6,354	55,442	781,572	66,140	222,776	603,895	381,119
	1914	7,562	88,152	1,015,715	69,124	246,189	772,080	525,891
	1909	7,347	77,827	874,108	53,502	186,128	674,311	488,183
	1904	6,379	68,338	659,539	45,144	139,849	501,254	361,045

TABLE 52. — *Continued*

GROUP	CENSUS YEAR	NUMBER OF ESTABLISHMENTS	WAGE EARNERS (AVERAGE NUMBER)	CAPITAL	WAGES	COST OF MATERIALS	VALUE OF PRODUCTS	VALUE ADDED BY MANUFACTURE
Chemicals and allied products	1919	12,224	427,008	5,617,738	493,744	3,747,675	5,610,299	1,862,624
	1914	12,374	299,569	3,034,209	167,494	1,289,346	2,001,635	712,289
	1909	12,060	267,261	2,167,425	129,003	931,044	1,526,599	595,555
	1904	9,826	227,326	1,588,328	102,388	633,919	1,075,519	441,600
Stone, clay, and glass products	1919	12,529	298,659	1,262,212	328,559	408,571	1,085,529	676,958
	1914	14,747	334,612	987,331	205,420	238,735	614,162	375,427
	1909	16,168	342,827	857,760	189,257	183,792	531,737	347,945
	1904	10,773	285,346	553,785	148,458	123,067	391,148	268,081
Metals and metal products, other than iron and steel	1919	10,667	339,469	1,796,669	394,628	1,910,035	2,760,294	850,259
	1914	10,023	262,154	1,013,632	166,895	1,023,354	1,417,043	393,689
	1909	8,783	249,607	867,407	146,794	892,066	1,240,410	348,344
	1904	5,880	198,531	571,902	110,208	633,133	895,975	262,842
Tobacco manufactures	1919	10,291	157,097	604,840	123,988	483,567	1,012,933	529,366
	1914	13,951	178,872	303,840	77,856	207,134	490,165	283,031
	1909	15,822	166,810	245,660	69,355	177,186	416,695	239,509
	1904	16,827	159,406	323,983	62,639	126,086	331,111	205,025
Vehicles for land transportation	1919	21,152	495,939	2,423,240	689,475	2,498,225	4,058,911	1,560,686
	1914	9,909	263,076	803,496	197,077	586,670	1,034,497	447,827
	1909	6,562	202,719	521,457	121,047	306,536	561,763	255,227
	1904	6,058	136,625	287,847	72,659	177,641	320,624	142,983
Railroad repair shops	1919	2,368	515,709	776,844	726,691	547,829	1,354,446	806,617
	1914	2,011	365,902	417,706	253,150	261,438	552,618	291,180
	1909	1,686	304,592	277,216	195,830	214,581	437,563	222,982
	1904	1,226	247,922	159,792	149,166	156,568	323,212	166,644
Miscellaneous industries	1919	21,781	1,227,111	5,295,377	1,537,110	2,867,667	6,180,256	3,312,589
	1914	18,725	585,755	2,022,410	357,527	812,694	1,716,033	903,339
	1909	16,255	482,206	1,471,056	261,089	661,499	1,333,668	672,169
	1904	12,957	408,477	985,766	201,803	445,892	936,882	490,990


COAL, ANTHRACITE
MILLIONS OF DOLLARS
PENNSYLVANIA
0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360
COAL, BITUMINOUS
MILLIONS OF DOLLARS
PENNSYLVANIA
WEST VIRGINIA
ILLINOIS
OHIO
KENTUCKY
INDIANA
ALABAMA
COLORADO
VIRGINIA
WYOMING
IOWA
KANSAS
OKLAHOMA
TENNESSEE
UTAH
MISSOURI
WASHINGTON
0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360
LIMESTONE
MILLIONS OF DOLLARS
PENNSYLVANIA
OHIO
INDIANA
NEW YORK
ILLINOIS
0 20
GRANITE
MILLIONS OF DOLLARS
VERMONT
MASSACHUSETTS
NORTH CAROLINA
WISCONSIN
NEW HAMPSHIRE
MAINE
MINNESOTA
0 20
SANDSTONE
MILLIONS OF DOLLARS
PENNSYLVANIA
OHIO
ILLINOIS
0 20

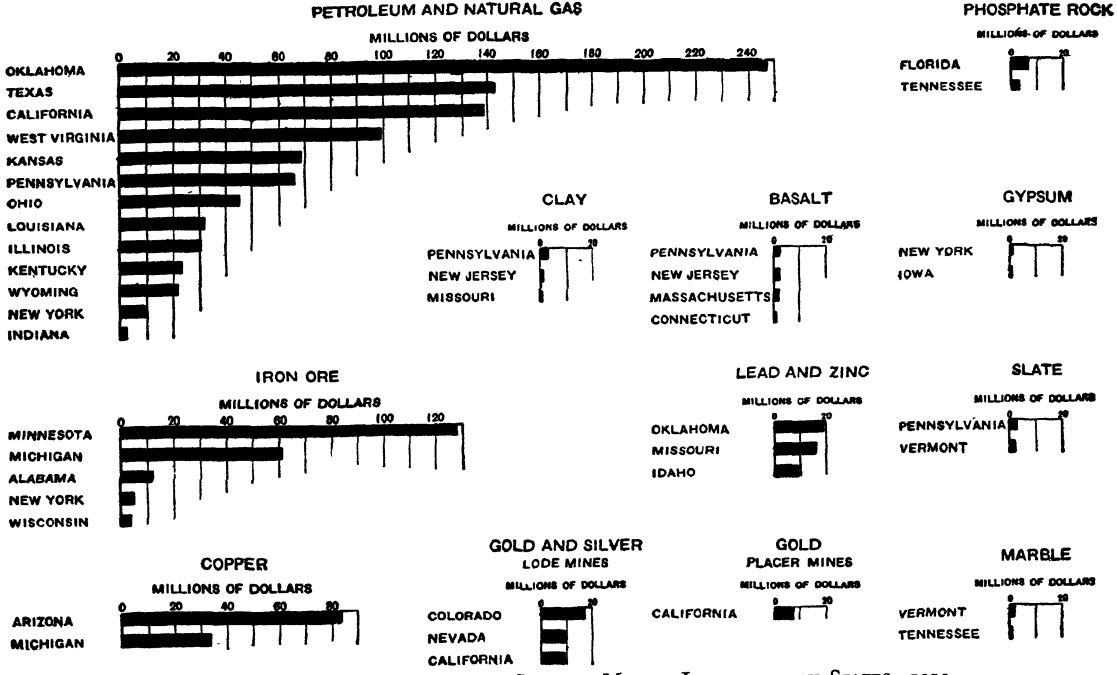


FIGURE 31. — VALUE OF PRODUCTS, LEADING MINING INDUSTRIES, BY STATES: 1919

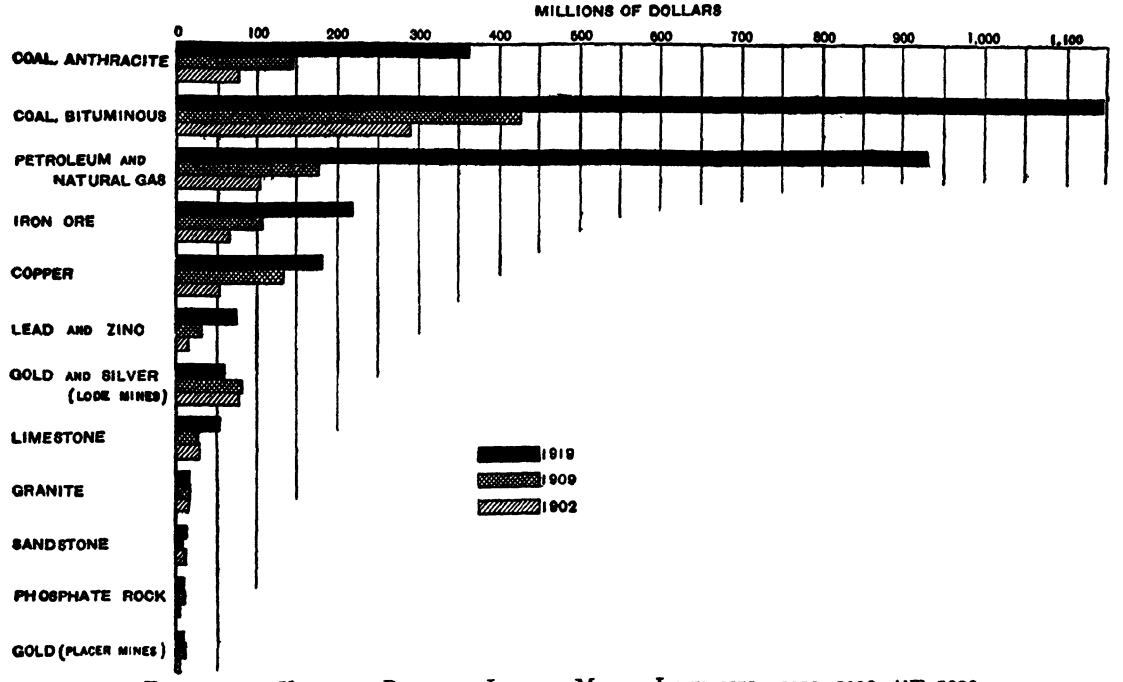


FIGURE 32. — VALUE OF PRODUCTS, LEADING MINING INDUSTRIES: 1919, 1909, AND 1902

TABLE 53. — VALUE OF MINERAL AND QUARRY PRODUCTS IN THE UNITED STATES: 1890–1922

[From the United States Geological Survey[1]]

YEAR	VALUE OF MINERAL AND QUARRY PRODUCTS
1890	615,429,000
1900	1,108,936,000
1910	1,987,844,000
1915	2,394,644,000
1918	5,540,496,000
1920	6,951,410,000
1922	4,652,000,000
1924	
1926	

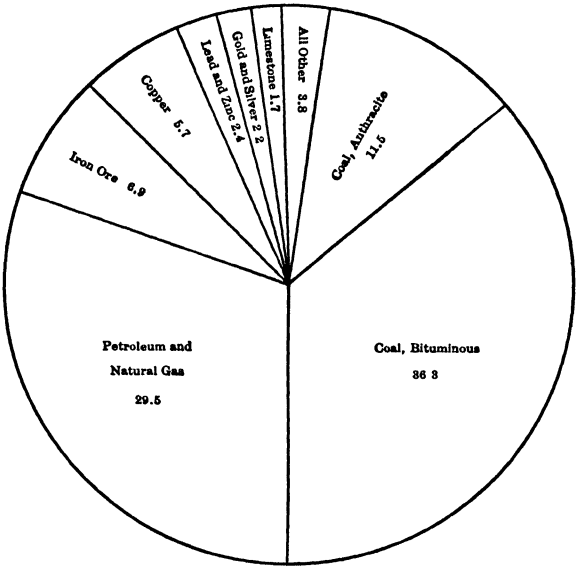


FIGURE 33. — PERCENTAGE DISTRIBUTION OF VALUE OF MINERAL PRODUCTS, BY INDUSTRIES: 1919

[1] These figures differ from those given by the Census Bureau in the next table because of different methods of calculation.

Mining

The production of minerals consists in taking raw materials from the stores of nature. There are over seventy-five important mineral and quarry products found in the United States.

What does the production of mineral and quarry products require in organization, capital, and labor? The census of mines and quarries made by the U. S. Census Bureau gives the answer. The figures are here summarized.

Table 54. — Comparative Summary, Producing Mine Enterprises

	1919	1909	1902	1889
Number of enterprises	21,280	21,268	46,858	
Number of mines and quarries	13,844	18,164	17,039	22,084
Number of petroleum and natural-gas wells	257,673	166,320	123,200	37,410
Number of natural-gas gasoline plants	1,115			
Persons engaged	1,077,675	1,041,682		
Proprietors and firm members, total	21,918	29,922		
Salaried employees	74,197	44,127	38,128	6,541
Wage earners (average number)	981,560	967,633	581,728	536,043
Wage earners, Dec. 15, or nearest representative day	1,088,189	1,065,283	581,728	536,043
Power used (aggregate horsepower)	6,723,786	4,608,253	2,867,562	
Capital	$6,955,466,831	$3,380,525,841		$1,310,535,318
Principal expenses				
Salaries	149,328,985	53,393,551	$39,020,552	5,520,600
Wages	1,295,936,226	586,774,079	369,959,960	222,041,887
Supplies and materials	519,593,676	173,411,438	123,814,967	86,075,925
Cost of ore, coal, and natural gas purchased as material or for resale	35,905,352	29,318,316		
Fuel and purchased power	122,105,930	45,136,550		
Royalties and rents	175,293,984	63,973,585	34,530,713	
Taxes	140,999,626	17,796,763		
Contract work	79,380,177	28,887,898	20,677,938	
Value of products	3,158,463,966	1,238,410,322	796,826,417	438,111,548

Examples

1. What is the cause of the reduction in mining enterprises?
2. Find the per capita production of value in each census year.
3. How much horse power was used for each $1000 of products?
4. What was the capital invested per $1000 of product?
5. What was the average annual increase of the wage earners in mining? Of the salaried employees?
6. How much horse power was used for each 1000 men?
7. What was the percentage increase in value of products?
8. What was the percentage increase of wages? Of salaries?

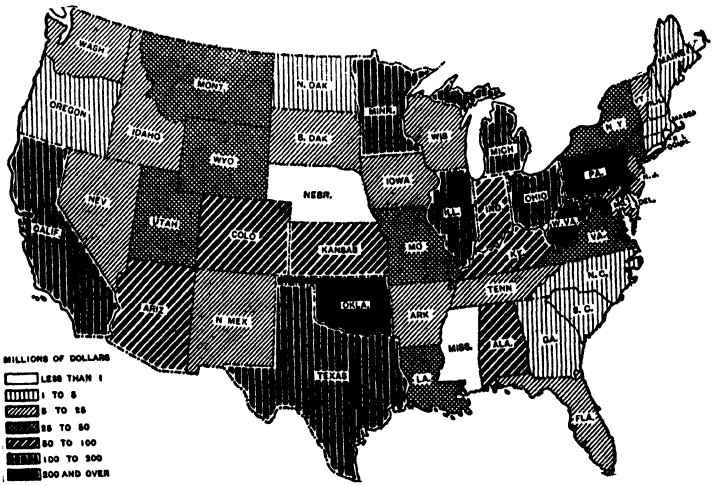


FIGURE 34. — VALUE OF PRODUCTS, MINING INDUSTRIES, BY STATES: 1912

PRODUCTION AND TRANSPORTATION

The values of products indicated here are figured at the source, that is, the value of farm products on the farm; of mining products at the mine; of lumber products at the mill; and of manufactures at the plant. The next step in the process is transportation and storage to get the

products where they are wanted, thus giving what economists call "place utility," and at the time they are wanted, or "time utility." We get some idea of the enormous extent of transportation when we learn from the figures of the Interstate Commerce Commission that the railroads of this country carried in one year (1922) 342 billions of tons of freight and 35 billions of passengers for a distance of one mile.[1]

The Social Interest

The vast production of farm products, manufactures, minerals, and lumber goes on year after year. The advance of science and with it the harnessing of power have solved or are solving the problems of production so that nature yields more readily to man's desires. We are now confronted with the more troublesome problems of getting goods to the consumer so that all may benefit by the advances in production that have been made, and with the still more baffling question of distribution of the values created among those engaged in creating them. The people have no social interest in production for its own sake; they are interested in production primarily for the advance of human welfare. Their interest does not cease with the present, for men as social beings must look to the welfare of the future. In consequence, the people are concerned with the sources of supply and the methods of production so that vital resources may be conserved and future welfare safeguarded. This subject will be treated later in the chapter on "Natural Resources."

[1] For further details of transportation see Chapter VII on "Transportation and Communication."

Sources for Research

1. The *Abstract of the Fourteenth Census* gives the details of the census of manufactures for 1919 and comparison with previous censuses. It also gives these details for states and leading cities. The facts are summarized in the *Statistical Abstract of the United States*, and figures for later censuses will be found summarized there. A new census of manufactures is made every five years by the Census Bureau.

2. Statistics of production on the farms are given in the *Yearbook of the U. S. Department of Agriculture*. Details for all crops by states may be found there.

3. Statistics of mines may be found in the *Abstract of the Fourteenth Census*, and summaries may be found in the *Statistical Abstract of the United States* and in the *World Almanac* and Chicago *Daily News Almanac*. The *Commerce Yearbook*, published annually by the U. S. Department of Commerce, gives full data on production and commerce.

4. The most exhaustive studies of mines and mining are made and published by the U. S. Geological Survey.

CHAPTER VI

AGRICULTURE AND RURAL LIFE

Agriculture is without doubt our most essential and most socially important industry. The food supply comes from its products; many of our important exports and some of the most important raw materials for manufactures come from the farm; and the prosperity of the other productive industries depends to a large degree upon the prosperity of agriculture. Moreover, agriculture, being the principal basis of rural life, is essential if we are to retain the strength which comes from that life. The trend away from rural to urban life, so marked in the last few years, is one of the disquieting social phenomenon of the time. Social scientists should investigate the causes and devise remedies to restore and maintain the balance between country and city. The state of agriculture is therefore important to the social and economic welfare of the nation, so important indeed that governments, state and national, enact much legislation and carry on many activities to support and foster it. It is highly important that we know the actual conditions of the industry so that wise actions may be taken for its benefit.

Some of the essential facts which must be at hand for a knowledge of the state of agriculture are: the statistics of agricultural population; the amount of land devoted to farms; farm values; the production of important crops; farm prices; cost of farm labor and supplies; the size of

farms; the amount of farm ownership and of tenantry; the financial conditions of farmers; the marketing of farm crops and the trend in all of these matters. The U. S. Census Bureau obtains detailed facts of farm conditions every ten years, and the U. S. Department of Agriculture is constantly securing and publishing data on all farm subjects. The Federal and state governments provide for extensive means of agricultural education through schools, colleges, experiment stations, and extension work. The Federal Government gathers farm statistics, keeps constant contact with crop conditions everywhere, issues crop statistics, makes scientific investigations, furnishes weather reports, fosters coöperative marketing, and provides through the Farm Loan Board for the financing of farm ownership. Some of the states supplement many of these activities. Millions of dollars are spent annually by states and the nation in improving agriculture and rural life.

The Farm Population

In 1920 there were 6,448,343 farms in the United States. The total population at that time dependent upon agriculture was 31,614,269. This represented 29.9 per cent of the total population and 61 per cent of the population designated by the Census as rural. Nearly all the farm population lived outside of cities, there being but 1 per cent in places over 2500. The Census of 1920 was the first to enumerate the farm population separately, so we cannot make valid comparisons with the past.

The farm population was made up as shown in Table 55. Comparisons with the total population and with urban and rural population and also by geographical divisions are made.

TABLE 55.— FARM POPULATION, AND TOTAL POPULATION, URBAN AND RURAL, BY DIVISIONS: 1920

DIVISION	TOTAL POPULATION	FARM POPULATION	FARM POPULATION IN CITIES AND OTHER INCORPORATED PLACES OF 2500 AND OVER	FARM POPULATION IN RURAL TERRITORY	RURAL POPULATION	RURAL POPULATION IN INCORPORATED PLACES (UNDER 2500)	RURAL POPULATION IN UNINCORPORATED TERRITORY
United States	**105,710,620**	**31,614,269**	**255,629**	**31,358,640**	**51,406,017**	**8,969,241**	**42,436,776**
GEOGRAPHIC DIVISIONS:							
New England	7,400,909	625,877	90,455	535,422	1,535,836	83,355	1,452,481
Middle Atlantic	22,261,144	1,892,789	31,628	1,861,161	5,588,549	1,075,503	4,513,046
East North Central	21,475,543	4,913,633	26,429	4,887,204	8,426,271	2,007,078	6,419,193
West North Central	12,544,249	5,171,596	18,413	5,153,183	7,816,877	2,074,005	5,742,872
South Atlantic	13,990,272	6,416,698	18,941	6,397,757	9,651,480	1,175,449	8,476,031
East South Central	8,893,307	5,182,937	8,131	5,174,806	6,899,100	693,195	6,205,905
West South Central	10,242,224	5,228,199	17,629	5,210,570	7,271,395	980,585	6,290,810
Mountain	3,336,101	1,168,367	15,374	1,152,993	2,121,121	477,245	1,643,876
Pacific	5,566,871	1,014,173	28,629	985,544	2,095,388	402,826	1,692,562

Examples

1. In which geographical division is the largest percentage of people engaged in farming?
2. In which geographical division is the largest percentage of the rural population engaged in agriculture?
3. Where is there the greatest tendency for farmers to live in villages? Account for this.
4. How many people are on the farms for every thousand people in the whole country?
5. In the *Abstract of the Fourteenth Census* find how your own state compares in all of these respects with neighboring states and with the whole.

The age of the farm population is shown next. In this table we discover that, while there are about 35 per cent of all the children of the country on farms, the percentage of people over 21 years is only 25.

TABLE 56. — FARM POPULATION OF THE UNITED STATES, AND TOTAL POPULATION, URBAN AND RURAL, BY AGE: 1920

AGE GROUP	TOTAL POPULATION	FARM POPULATION	URBAN POPULATION	RURAL POPULATION
All ages	**105,710,620**	**31,614,269**	**54,304,603**	**51,406,017**
Under 10 years . .	22,971,305	8,138,070	10,326,027	12,645,278
10 to 20 years . . .	21,852,795	7,824,106	10,039,484	11,813,311
21 years and over .	60,886,520	15,652,093	33,939,092	26,947,428

Examples

1. What percentage of the people is on farms?
2. What percentage of children under 10 years is on farms?
3. What percentage of people 10 to 20 is on farms?
4. What percentage over 20 is on farms?
5. Account for the differences.

The farm population by sex compared with urban and rural population is shown in Table 57 for the country and for each geographical division.

TABLE 57. — FARM POPULATION, URBAN AND RURAL, BY SEX AND BY DIVISIONS: 1920

DIVISION	FARM POPULATION			URBAN POPULATION			RURAL POPULATION		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
United States	**31,614,269**	**16,496,338**	**15,117,931**	**54,304,603**	**27,203,312**	**27,101,291**	**51,406,017**	**26,697,119**	**24,708,898**
GEOGRAPHIC DIVISIONS:									
New England	625,877	330,206	295,671	5,865,073	2,886,507	2,978,566	1,535,836	786,084	749,752
Middle Atlantic	1,892,789	993,979	898,810	16,672,595	8,324,263	8,348,332	5,588,549	2,882,182	2,706,367
E. North Central	4,913,633	2,590,945	2,322,688	13,049,272	6,648,676	6,400,596	8,426,271	4,386,365	4,039,906
W. North Central	5,171,596	2,760,145	2,411,451	4,727,372	2,357,197	2,370,175	7,816,877	4,101,870	3,715,007
South Atlantic	6,416,698	3,264,380	3,152,318	4,338,792	2,118,444	2,220,348	9,651,480	4,917,399	4,734,081
E. South Central	5,182,937	2,640,245	2,542,692	1,994,207	965,075	1,029,132	6,899,100	3,506,615	3,392,485
W. South Central	5,228,199	2,713,605	2,514,594	2,970,829	1,492,700	1,478,129	7,271,395	3,773,129	3,498,266
Mountain	1,168,367	636,150	532,217	1,214,980	623,658	591,322	2,121,121	1,165,641	955,480
Pacific	1,014,173	566,683	447,490	3,471,483	1,786,792	1,684,691	2,095,388	1,177,834	917,554

Examples

1. How many males are there in the country for every 100 females? In the urban population? In the rural population? Among the farming population?
2. Find the same for each of the geographical divisions.
3. Account for the differences.
4. Tabulate the same information for your own state.

The farm population by race, nativity, and parentage is classified in the next table to show the total population and the total by race or nativity on farms.

TABLE 58. — FARM POPULATION, BY RACE, NATIVITY, AND PARENTAGE, BY DIVISIONS: 1920

DIVISION	TOTAL	NATIVE WHITE	NATIVE PARENTAGE	FOREIGN AND MIXED PARENTAGE	FOREIGN-BORN WHITE	COLORED
United States	**31,614,269**	**24,842,614**	**21,045,836**	**3,796,778**	**1,471,040**	**5,300,615**
GEOGRAPHIC DIVISIONS:						
New England	625,877	546,178	417,747	128,431	77,844	1,855
Middle Atlantic	1,892,789	1,750,182	1,469,287	280,895	127,563	15,044
East North Central	4,913,633	4,535,793	3,457,822	1,077,971	350,512	27,328
West North Central	5,171,596	4,644,672	3,161,917	1,482,755	479,917	47,007
South Atlantic	6,416,698	4,048,438	4,008,035	40,403	18,405	2,349,855
East South Central	5,182,937	3,658,174	3,629,842	28,332	8,399	1,516,364
West South Central	5,228,199	3,858,811	3,586,617	272,194	138,621	1,230,767
Mountain	1,168,367	1,003,702	767,688	236,014	109,688	54,977
Pacific	1,014,173	796,664	546,881	249,783	160,091	57,418

Examples

1. What percentage of foreign-born white people is among the farm population?
2. What percentage of the negro population is on farms? Of Chinese and Japanese?
3. In which sections does the largest percentage of foreign-born, natives of foreign parentage, and colored people live on farms?
4. Account for some of the marked differences.
5. Find the same information for your own state.

Farm Acreage and Values

The number of farms, their acreage, and value are exhibited in the table which follows and comparison is made with the corresponding figures from previous censuses since 1850.

Table 59. — Population, Farms, and Farm Property in the United States: 1850–1920

[Figures for 1920 relate to Jan. 1; for 1910, to April 15; for earlier years to June 1]

ITEM	1920	1910	1900
Population	105,710,620	91,972266	75,994,575
Number of farms	6,448,343	6,361,502	5,737,372
Approximate land area of the United States . . acres	1,903,215,360	1,903,289,600	1,903,461,760
All lands in farms acres	955,883,715	878,798,325	838,591,774
Improved land acres	503,073,007	478,451,750	414,498,487
Unimproved land . . . acres	452,810,708	400,346,575	424,093,287
Value of all farm property	$77,924,100,338	$40,991,449,090	$20,439,901,164
Land and buildings	66,316,002,602	34,801,125,697	16,614,647,491
Implements and machinery . .	3,594,772,928	1,265,149,783	749,775,970
Live stock	8,013,324,808	4,925,173,610	3,075,477,703

ITEM	1890	1880	1870
Population	62,947,714	50,155,783	38,558,371
Number of farms	4,564,641	4,008,907	2,659,985
Approximate land area of the United States acres	1,903,337,600	1,903,337,600	1,903,337,600
All land in farms acres	623,218,619	536,081,835	407,735,041
Improved land acres	357,616,755	284,771,042	188,921,099
Unimproved land . . . acres	265,601,864	251,310,793	218,813,942
Value of all farm property	$16,082,267,689	$12,180,501,538	$8,944,857,749
Land and buildings	13,279,252,649	10,197,096,776	7,444,054,462
Implements and machinery . .	494,247,467	406,520,055	270,913,678
Live stock	2,308,767,573	1,576,884,707	1,229,889,609

ITEM	1860	1850
Population	31,443,321	23,191,876
Number of farms	2,044,077	1,449,073
Approximate land area of the United States acres	1,903,337,600	1,884,375,680
All land in farms acres	407,212,538	293,560,614
Improved land acres	163,110,720	113,032,614
Unimproved land . . . acres	244,101,818	180,528,000
Value of all farm property	$7,980,493,063	$3,967,343,580
Land and buildings	6,645,045,007	3,271,575,426
Implements and machinery . .	246,118,141	151,587,638
Live stock	1,089,329,915	544,180,516

Examples

1. Find the percentage of all land represented by land in farms and by improved land. What is the average acreage per farm? Of improved land? What is the average value per farm and per acre? Compare with 1910 and previous censuses.
2. What trend in each respect is observable?

Size of Farms

The size of farms is next shown for the census years from 1880 to 1920.

Table 60. — Number of Farms in the United States, Distribution by Size: 1880–1920

Size	Number of farms				
	1920	**1910**	**1900**	**1890**	**1880**
Total	**6,448,343**	**6,361,502**	**5,737,372**	**4,564,641**	**4,008,907**
Under 10 acres	288,772	335,043	267,229	150,194	139,241
Under 3 acres	20,350	18,033	41,385		4,352
3 to 9 acres	268,422	317,010	225,844		134,889
10 to 19 acres	507,763	504,123	406,641	265,550	254,749
20 to 49 acres	1,503,732	1,414,376	1,257,496	902,777	781,574
50 to 99 acres	1,474,745	1,438,069	1,366,038	1,121,485	1,032,810
100 to 499 acres	2,456,107	2,494,461	2,290,282	2,008,694	1,695,983
100 to 174 acres	1,449,630	1,516,286	1,422,262		
175 to 259 acres	530,800	534,191	490,069		
260 to 499 acres	475,677	443,984	377,951		
500 to 999 acres	149,819	125,295	102,526	84,395	75,972
1000 acres and over	67,405	50,135	47,160	31,546	28,578

Examples

1. What percentage of all farms is found in each group?
2. Has the tendency in each group been to increase or decrease since 1880?
3. Account for some of the marked changes.

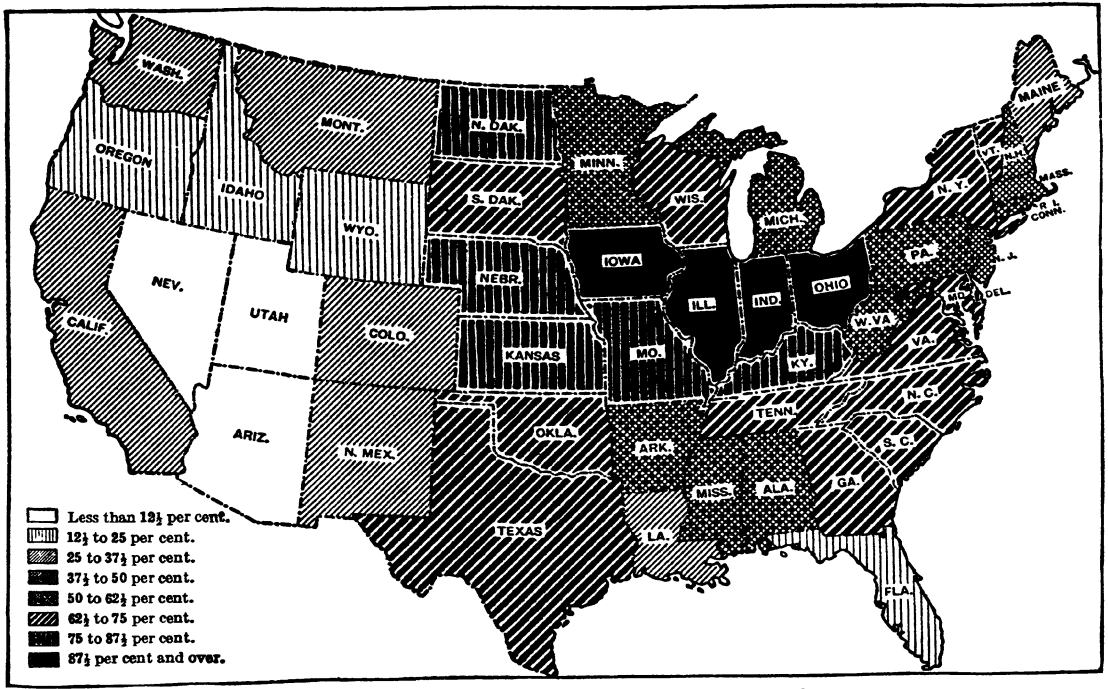


FIGURE 35. — PERCENTAGE OF TOTAL LAND AREA IN FARMS, BY STATES: 1920

IMPROVED AND UNIMPROVED LAND IN FARMS, AND LAND NOT IN FARMS, BY STATES: 1920 AND 1910

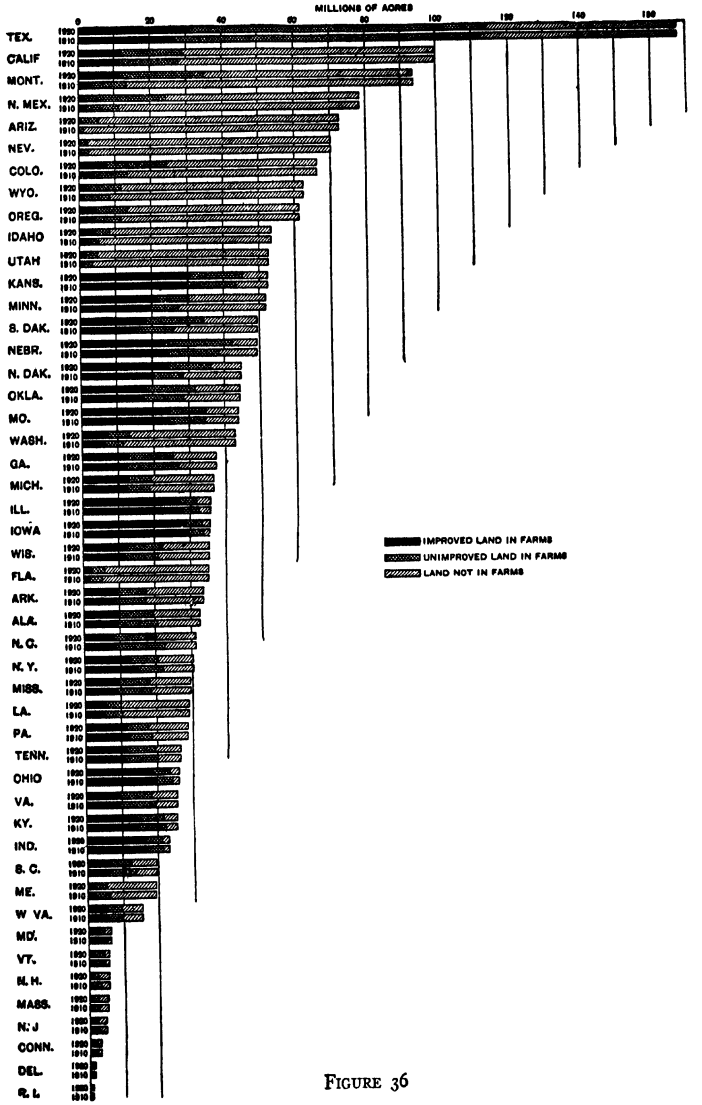


FIGURE 36

The Tenure of Farms

The operators of farms are classified into owners, managers, and tenants. The study of the tendencies in the tenure of farms is one of the most important social problems of rural life. The ideal social condition is to have owners in operation of their farms. Tenantry has been looked

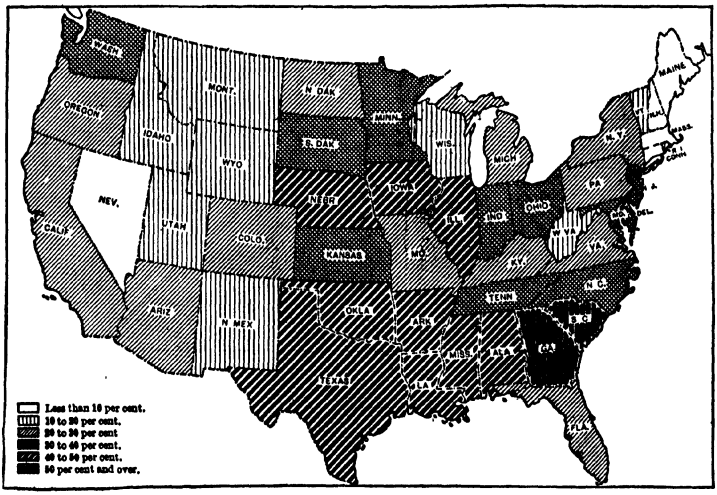


FIGURE 37. — PERCENTAGE OF IMPROVED FARM LAND OPERATED BY TENANTS, BY STATES: 1920

upon by all students of social well-being as an evil and its increase as a cause for apprehension. Whenever tenantry is a temporary condition preliminary to ownership it is good. The young farmer starting in life as a tenant with an ambition to own a farm is a source of strength, but the person who is content to live the life of a tenant continuously without an ambition for ownership is a source of social weakness.

The study of the census figures indicates that tenantry is increasing in many parts of the United States. Part of the increase is due to the drift of progressive youths to the city; part to the increased value of farms as indicated previously which makes it harder for a young man without capital to establish himself in ownership; and part to the lack of financial aids to farm ownership.

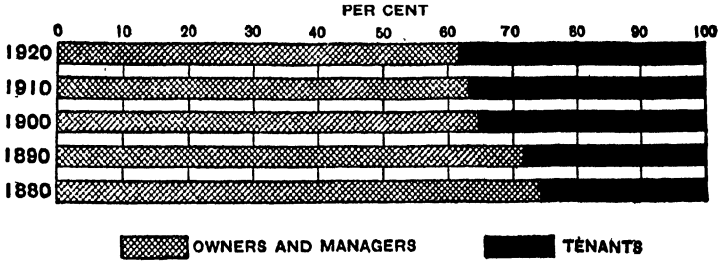


FIGURE 38. — PER CENT DISTRIBUTION OF FARMS IN THE UNITED STATES, BY TENURE: 1880–1920

The census classification for operators of farms is as follows:

Farm owners include (1) farmers operating their own land only and (2) those operating in addition to their own land some land hired from others. The latter are sometimes designated *part owners*, the term *full owners* being then used for those owning all the land they farm.

Farm managers are farmers operating a farm for the owner for wages or a salary.

Farm tenants are farmers who, as tenants, renters, or croppers, operate only rented land. They were reported in 1920 in five classes: (1) *share tenants* — those who pay a certain share of the products, as one-half, one-third, or one-quarter, for the use of the farm, but furnish their own work animals; (2) *croppers* — share tenants whose work animals are furnished by their landlords; (3) *share-cash tenants* — those who pay a share of the products for a part of the land and

cash for a part; (4) *cash tenants* — those who pay a cash rental, as $7 per acre of crop land or $500 for the use of the whole farm; (5) *standing renters* — those who pay a stated amount of farm products for the use of the farm, as 3 bales of cotton or 500 bushels of corn. In some cases the character of the tenancy was not indicated on the schedule; such tenants are shown in the tables as unspecified.

The facts of farm tenure since 1880 are given in the next table. These figures clearly show a decrease in owner operation and an increase in tenantry.

TABLE 61. — NUMBER OF FARMS IN THE UNITED STATES BY TENURE: 1880–1920

TENURE	NUMBER OF FARMS				
	1920	1910	1900	1890	1880
Total	**6,448,343**	**6,361,502**	**5,737,372**	**4,564,641**	**4,008,907**
Owners and managers	3,993,539	4,006,826	3,712,408	3,269,728	2,984,306
Owners	3,925,090	3,948,722	3,653,323		
Owning entire farm	3,366,510	3,354,897	3,201,947		
Hiring additional land	558,580	593,825	451,376		
Managers	68,449	58,104	59,085		
Tenants	2,454,804	2,354,676	2,024,964	1,294,913	1,024,601
Share and share-cash	1,806,634	1,528,389	1,273,299	840,254	702,244
Share	1,678,812	1,399,923			
Share-cash	127,822	128,466			
Cash and unspecified	648,170	826,287	751,665	454,659	322,357
Cash	585,005	712,294			
Unspecified	63,165	113,993			

The value of farms operated by the various classes of operators in 1920 and 1910 is next shown. By using the figures in the following tables, together with those of the preceding one, the trend of values of owner-operated and tenant-operated farms may be determined. More intensive findings of trends in types of tenantry also may be determined.

TABLE 62. — VALUE OF FARM PROPERTY IN THE UNITED STATES, BY TENURE: 1880–1920

TENURE	ALL FARM PROPERTY	
	1920	1910
Total	**$77,924,100,337**	**$40,991,449,090**
Owners	47,611,454,944	26,669,634,373
Owning entire farm	36,837,394,179	20,730,867,111
Hiring additional land	10,774,151,765	5,938,767,262
Managers	3,132,273,005	1,700,624,936
Tenants	27,180,281,389	12,621,189,781
Share and share-cash	19,187,846,584	7,981,203,217
Share	15,157,085,982	
Share-cash	4,030,760,602	
Cash and unspecified	7,992,434,805	4,639,986,564
Cash	7,320,236,819	
Unspecified	672,197,986	

Examples

1. Determine the percentage of decrease in owner operation of farms in each decade since 1880. Determine the percentage of increase in tenantry in each decade since 1880.

2. When was the greatest increase in tenantry?

3. What was the value in 1920 of each owner-operated farm? Of each manager-operated farm? Of each tenant-operated farm?

4. If the average changes since from 1910 to 1920 continue, what will be the situation in 1930?

5. Find the facts about tenantry in your own state and in your own section.

6. Why is tenantry a bad social system?

7. What can be done to lessen tenantry and increase ownership?

Tenantry was distributed through the geographical divisions of the country as shown in Table 63.

TABLE 63. — NUMBER OF FARMS, BY TENURE, BY DIVISIONS: 1920 AND 1910

	DIVISION AND STATE	TOTAL NUMBER OF FARMS		NUMBER OF FARMS OPERATED BY —					
				All owners		Managers		Tenants	
		1920	1910	1920	1910	1920	1910	1920	1910
1	**United States**	**6,448,343**	**6,361,502**	**3,925,090**	**3,948,722**	**68,449**	**58,104**	**2,454,804**	**2,354,676**
	GEOGRAPHIC DIVISIONS:								
2	New England	156,564	188,802	140,160	168,408	4,802	5,379	11,602	15,015
3	Middle Atlantic . . .	425,147	468,379	327,104	355,036	9,853	9,072	88,190	104,271
4	East North Central . .	1,084,744	1,123,489	766,786	809,044	13,551	10,848	304,407	303,597
5	West North Central .	1,096,951	1,109,948	711,156	758,946	10,776	8,384	375,019	342,618
6	South Atlantic . . .	1,158,976	1,111,881	607,089	593,154	9,799	8,298	542,088	510,429
7	East South Central . .	1,051,600	1,042,480	525,808	510,452	3,506	3,290	522,286	528,738
8	West South Central . .	996,088	943,186	464,328	440,905	5,013	4,696	526,747	497,585
9	Mountain	244,109	183,446	202,515	160,844	4,116	2,912	37,478	19,680
10	Pacific	234,164	189,891	180,144	151,933	7,033	5,225	46,987	32,733

Examples

1. In which section was tenantry most prevalent in 1920 and in 1910?
2. Account for the differences in the various divisions.
3. Find the amount of tenantry in your own state.

Tenantry of Farmers by Color

A considerable proportion of tenantry is found in the South and among the colored farmers. The next table is, therefore, important in showing the distribution as between white and colored farm operators.

Table 64. — Number and Acreage of Farms in the United States, by Color and Tenure: 1920 and 1910

Color and tenure	Number of farms		All land in farms (acres)	
	1920	1910	1920	1910
WHITE FARMERS				
Total	**5,498,454**	**5,440,619**	**910,939,194**	**832,166,020**
Owners	3,691,868	3,707,501	620,070,823	579,478,154
Owning entire farm	3,174,109	3,159,088	447,244,925	448,961,809
Hiring addit. land	517,759	548,413	172,825,898	130,516,345
Managers	66,223	56,560	53,653,478	53,304,976
Tenants	1,740,363	1,676,558	237,214,893	199,382,890
Share	1,163,942	1,026,372	142,337,408	109,695,138
Share-cash	119,395	113,843	24,025,817	18,734,775
Cash	400,907	447,851	62,762,080	55,948,318
Unspecified	56,119	88,492	8,089,588	15,004,659
COLORED FARMERS				
Total	**949,889**	**920,883**	**44,944,521**	**46,632,305**
Owners	233,222	241,221	16,704,192	19,076,463
Owning entire farm	192,401	195,809	14,005,208	15,961,506
Hiring addit. land	40,821	45,412	2,698,984	3,114,957
Managers	2,226	1,544	475,679	425,889
Tenants	714,441	678,118	27,764,650	27,129,953
Share	514,870	373,551	18,385,143	13,358,580
Share-cash	8,427	14,623	308,611	655,093
Cash	184,098	264,443	8,719,575	11,898,533
Unspecified	7,046	25,501	351,321	1,217,747

Examples

1. Compare the number of white and negro farmers.

2. Compare the amount of land in farms operated by white and colored farmers. What is the relative size of farms? What is the relative amount of land operated by each?

3. How does the number of white tenants compare with that of colored?

Foreign-born Farmers

The extent to which foreign-born persons operate farms is next brought out in comparison with native white and colored farmers. The table shows that the farm ownership and tenantry by foreign-born decreased between 1910 and 1920. This was probably due to the large departures of foreign subjects for Europe during the war period.

Table 65. — Number of Farm Operators in the United States, by Color, Nativity, and Tenure: 1920 and 1910

Color and nativity	Total		Owners		Managers		Tenants	
	1920	1910	1920	1910	1920	1910	1920	1910
All farm operators	**6,448,343**	**6,361,502**	**3,925,090**	**3,948,722**	**68,449**	**58,104**	**2,454,804**	**2,354,676**
White farm operators	5,498,454	5,440,619	3,691,868	3,707,501	66,223	56,560	1,740,363	1,676,558
Native	4,917,386	4,771,063	3,227,521	3,162,584	59,035	50,087	1,630,830	1,558,392
Foreign-born	581,068	669,556	464,347	544,917	7,188	6,473	109,533	118,166
Colored farm operators	919,889	920,883	233,222	241,221	2,226	1,544	714,441	678,118

Examples

1. What percentage of the total number of farmers was native white, foreign born, and colored in 1910 and 1920?

2. In which group were the greatest changes recorded between 1910 and 1920?

3. Find similar percentages for your own state, and compare the results with the table.

The distribution by geographical divisions follows.

TABLE 66. — NUMBER OF FARM OPERATORS, BY COLOR AND NATIVITY, BY DIVISIONS: 1920 AND 1910

DIVISION	ALL FARM OPERATORS		NATIVE WHITE FARM OPERATORS		FOREIGN-BORN WHITE FARM OPERATORS		COLORED FARM OPERATORS	
	1920	1910	1920	1910	1920	1910	1920	1910
United States	**6,448,343**	**6,361,502**	**4,917,386**	**4,771,063**	**581,068**	**669,556**	**949,889**	**920,883**
GEOGRAPHIC DIVISIONS								
New England	156,564	188,802	128,028	161,009	28,265	27,451	271	342
Middle Atlantic	425,147	468,379	376,701	419,342	46,910	47,076	1,536	1,961
East North Central	1,084,744	1,123,489	935,492	929,619	144,775	188,153	4,477	5,717
West North Central	1,096,951	1,109,948	883,809	830,642	206,223	269,442	6,919	9,864
South Atlantic	1,158,976	1,111,881	767,771	748,878	7,373	7,141	383,832	355,862
East South Central	1,051,600	1,042,480	740,862	712,443	3,506	4,819	307,232	325,218
West South Central	996,088	943,186	724,301	692,624	39,937	41,501	231,850	209,061
Mountain	244,109	183,446	197,678	143,991	40,984	31,427	5,447	8,028
Pacific	234,164	189,891	162,744	132,515	63,095	52,546	8,325	4,830

Examples

1. In which geographical divisions do the foreign-born have the largest proportion of the farm operators?

2. Show the increase or decrease of each class of operators from 1910 to 1920. Which made the greatest increase? The greatest decrease?

3. Chart the increases and decreases in each division.

4. Find similar facts for your own state in the *Abstract of the Fourteenth Census.*

Foreign-born white farmers come from nearly every country in Europe — the Germans, Swedes, Norwegians, Canadians, Russians, and Austrians furnishing the largest number, in the order named.

TABLE 67.—NUMBER AND VALUE OF FARMS IN THE UNITED STATES OPERATED BY WHITE FARMERS, BY COUNTRY OF BIRTH AND TENURE OF FARMER: 1920

NATIVITY OF FARMER	NUMBER OF FARMS			VALUE OF FARMS (LAND AND BUILDINGS)		
	Owners	Managers	Tenants	Owners	Managers	Tenants
All white farmers	**3,691,868**	**66,223**	**1,740,363**	**$39,215,462,823**	**$2,629,284,676**	**$21,941,311,356**
Born in the United States	3,162,223	57,440	1,598,183	32,224,972,299	2,195,639,342	19,170,798,790
Born in foreign countries total	464,347	7,188	109,533	6,261,305,080	346,174,880	2,378,061,578
England	21,840	858	3,916	259,698,564	49,474,775	75,319,075
Scotland	6,004	414	1,187	97,311,209	40,553,962	24,608,680
Wales	2,071	53	348	28,747,948	2,502,945	6,424,730
Ireland	13,925	581	2,056	218,449,446	37,416,312	52,576,358
Norway	43,815	361	7,423	670,681,449	11,291,280	196,109,002
Sweden	50,114	622	9,725	662,305,841	23,284,419	293,014,842
Denmark	19,523	336	5,706	328,542,491	14,921,703	174,011,689
Netherlands (Holland)	10,364	197	5,028	154,825,973	7,535,855	159,634,440
Switzerland	10,324	166	2,561	151,657,764	8,536,259	65,105,753
France	4,942	100	1,077	65,375,414	3,395,230	32,032,576
Germany	116,962	1,203	22,502	1,874,800,267	50,095,598	595,704,758
Poland	14,874	114	2,364	110,329,504	3,281,638	40,032,487
Austria	24,534	235	5,403	242,933,374	5,759,649	80,892,919
Hungary	5,439	80	1,603	38,935,017	1,654,320	19,538,470
Russia	24,244	179	7,965	370,115,899	4,909,330	141,651,794
Finland	13,730	46	1,212	70,040,299	543,175	12,397,914
Rumania	533	7	153	5,655,380	151,850	1,860,610
Greece	540	13	293	4,620,270	141,200	4,544,772
Italy	13,403	234	4,630	100,945,723	8,725,826	71,753,927
Portugal	2,896	49	1,309	39,051,251	2,421,450	34,458,488
Other European countries	15,238	180	4,689	220,391,049	19,189,386	100,961,024
Mexico	1,625	117	10,400	12,036,003	5,598,026	53,573,229
Canada	41,864	910	5,894	443,791,751	40,640,375	92,409,036
Other countries	5,543	133	2,089	90,063,194	4,150,317	49,445,005
Country of birth not reported	65,298	1,595	32,647	729,185,444	87,470,454	392,450,988

Examples

1. What percentage of the farm operators was foreign-born?
2. What percentage of all farm operators was from each foreign country listed?
3. Which nationality showed the greatest percentage of ownership? Tenantry? Manager operation?
4. From the table of foreign-born find which nationality has the largest percentage of its people as farm operators.
5. What was the value per farm of the farms operated by each nationality?
6. From the *Abstract of the Fourteenth Census* compile the corresponding facts for your state and neighboring states.

Female Farm Operators

It is apparent from the next table that women are engaged extensively in farm management, there being a total of 261,719 female farm operators, operating 26,104,686 acres of land. There were 187,868 female owners, 770 managers, and 73,081 tenants.

Table 68. — Number and Acreage of Farms in the United States with Averages, by Sex and Tenure of Farmer : 1920

Sex and tenure of farmer	Number of farms	Total land in farms (acres)	Average per farm
Total	**6,448,343**	**955,883,715**	**148.2**
Male	6,186,624	929,779,029	150.3
Female	261,719	26,104,686	99.7
Owners	3,925,090	636,775,015	162.2
Male	3,737,222	614,185,155	164 3
Female	187,868	22,589,860	120.2
Managers	68,449	54,129,157	790.8
Male	67,679	53,943,874	797.1
Female	770	185,283	240.6
Tenants	2,454,804	264,979,543	107.9
Male	2,381,723	261,650,000	109.9
Female	73,081	3,329,543	45.6

Examples

1. In which type of operation do females have the largest percentage? What does this indicate as to the reasons why women engage in operating farms?
2. What is the relative size of farms operated by women compared with those operated by men?
3. Find similar facts for your own state.

Age and Tenure

The statistics of age of farmers according to tenure of farms reported by the United States Census throw much light on the problems of farm property and ownership. We naturally find the bulk of the farmers in the most active period of life, that is, between 25 and 55. The number of farm owners under 25 is small, while the number of tenants is high. The first fact is to be expected since it requires considerable means to own a farm. The latter fact is favorable only if it indicates that young farmers are on their way toward ownership.

The maximum of farm ownership is reached in the age group 45 to 54; the maximum of tenant operation is found in the age group 25 to 34.

These facts and others of significance are brought out in Table 69.

Examples

1. Compare the year 1910 with 1920 to see whether there is an increase or decrease in each item.
2. At what age is found the largest number of farm operators owning farms? Renters? Managers?
3. What is the social significance of the increase of tenants over 65?

TABLE 69. — FARM OPERATORS IN THE UNITED STATES, WITH PER CENT DISTRIBUTION, BY AGE AND TENURE: 1920 AND 1910

AGE AND CENSUS YEAR	NUMBER								
	Total	All owners	Full owners, free	Full owners, mortgaged	Part owners	Managers	All tenants	Share and share-cash tenants	Cash and unspecified tenants
All farmers: 1920	**6,448,343**	**3,925,090**	**2,149,276**	**1,217,234**	**558,580**	**68,449**	**2,454,804**	**1,806,634**	**648,170**
1910	**6,361,592**	**3,948,722**	**2,295,277**	**1,059,629**	**593,825**	**58,104**	**2,354,676**	**1,528,389**	**826,287**
Reporting age: 1920	6,364,163	3,873,034	2,117,459	1,203,190	552,385	66,636	2,424,493	1,785,352	639,141
1910	6,339,476	3,934,968	2,284,343	1,058,018	592,607	56,846	2,347,662	1,524,494	823,168
Under 25 years — 1920	383,680	87,400	39,111	28,970	19,319	5,484	290,796	243,316	47,480
1910	419,330	97,690	54,415	23,715	19,560	4,820	316,820	236,374	80,446
25 to 34 years — 1920	1,333,020	561,442	215,759	227,513	118,170	17,983	753,595	569,834	183,761
1910	1,413,876	620,961	297,261	192,747	130,953	15,700	777,215	524,916	252,299
35 to 44 years — 1920	1,587,519	938,174	422,864	348,618	166,692	18,757	630,588	455,064	175,524
1910	1,571,469	969,859	487,141	301,674	181,044	16,212	585,398	368,960	216,438
45 to 54 years — 1920	1,482,494	1,021,445	556,833	319,980	144,632	14,063	446,986	313,198	133,788
1910	1,432,707	1,036,493	592,148	287,992	156,353	11,724	384,490	231,721	152,769
55 to 64 years — 1920	993,771	780,579	508,786	195,740	76,053	7,226	205,966	140,913	65,053
1910	947,524	741,614	490,910	172,197	78,507	5,840	200,070	117,709	82,361
65 years and over — 1920	583,679	483,994	374,106	82,369	27,519	3,123	96,562	63,027	33,535
1910	554,570	468,351	362,468	79,693	26,190	2,550	83,669	44,814	38,855
Not reporting age: 1920	84,180	52,056	31,817	14,044	6,195	1,813	30,311	21,282	9,029
1910	22,026	13,754	10,934	1,602	1,218	1,258	7,014	3,895	3,119

Farm Experience

Table 70 is introduced to show the extent of farm experience of the farmers. It shows a very large proportion of the farm owners who have been on the farm more than ten years. It also indicates a very large number and an increasing number of tenants who have been on the farm more than ten years. This latter is an unhealthy sign.

Examples

1. How many of each class of farm operators had less than 1 year of experience? From 2 to 5 years? From 5 to 10? Over 10 years?
2. What is the significance of tenant operators having over 10 years' experience? Note the change between 1910 and 1920 in this report.
3. Find the percentage increase of tenantry in each age group between 1910 and 1920.
4. Compare the change of the two types of tenantry in each age group between 1910 and 1920.
5. Since cash tenants are likely to be more substantial, what do the figures indicate?

Farm Mortgages

The extent of mortgages on farms operated by their owners is brought out in the census figures. Comparisons are made with previous censuses, and material changes are tabulated.

The figures indicate an increasing amount of mortgages on farms operated by their owners. This tendency may or may not be for the good of the country. It may mean in some instances that the farmers are not making expenses and are actually running behind. It may, on the other hand, in some instances mean that farmers are using their credit to make improvements such as draining, clearing, improving, and stocking their farms for increased

TABLE 70. — FARM OPERATORS IN THE UNITED STATES ACCORDING TO NUMBER OF YEARS ON FARM AND TENURE: 1920 AND 1910

NUMBER OF YEARS ON FARM, AND CENSUS YEAR	TOTAL	ALL OWNERS	FULL OWNERS	PART OWNERS	MANAGERS	ALL TENANTS	SHARE AND SHARE-CASH TENANTS	CASH AND UNSPECIFIED TENANTS
All farmers								
Total 1920	**6,448,343**	**3,925,090**	**3,366,510**	**558,580**	**68,449**	**2,454,804**	**1,806,634**	**648,170**
1910	**6,361,502**	**3,948,722**	**3,354,897**	**593,825**	**58,104**	**2,354,676**	**1,528,389**	**826,287**
Reporting years on farm . 1920	6,227,539	3,845,236	3,298,623	546,613	64,011	2,318,292	1,702,316	615,976
1910	5,794,768	3,510,868	2,953,001	557,867	53,341	2,230,559	1,451,294	779,265
Less than 1 year . . . 1920	660,713	219,598	187,070	32,528	14,341	426,774	341,596	85,178
1910	1,000,293	242,640	192,072	50,568	13,360	744,293	541,018	203,275
1 year 1920	898,019	305,670	246,332	59,338	12,340	580,009	453,643	126,366
1910	627,860	236,887	186,606	50,281	8,544	382,429	257,859	124,570
2 to 4 years 1920	1,397,958	657,236	536,805	120,431	17,893	722,829	525,527	197,302
1910	1,371,607	695,681	556,787	138,894	15,175	660,751	412,119	248,632
5 to 9 years 1920	1,086,458	738,467	617,857	120,610	10,439	337,552	227,581	109,971
1910	992,468	716,387	589,532	126,855	8,366	267,715	150,554	117,161
10 years and over . . . 1920	2,184,391	1,924,265	1,710,559	213,706	8,998	251,128	153,969	97,159
1910	1,802,540	1,619,273	1,428,004	191,269	7,896	175,371	89,744	85,627
Not reporting years on farm 1920	220,804	79,854	67,887	11,967	4,438	136,512	104,318	32,194
1910	566,734	437,854	401,896	35,958	4,763	124,117	77,095	47,022

production. In such case it is a good outlook for the country. Actually both of these conditions prevail somewhat. The most important reason for the increase may, however, be found in the increased values of farms and the consequent inability of the purchaser to pay cash in full or to pay off as rapidly as formerly. Only a short time ago it was possible to secure a farm in the fertile regions of the West for as low as $1.50 an acre by becoming a homesteader. Naturally the farmers in those times did not have to mortgage their property very heavily to get started. Those same lands are now as high as $250 an acre and to purchase a farm requires more money and some time in which to pay the indebtedness. The fact that the heaviest farm indebtedness is found in the richest agricultural states indicates that mortgages are the natural result of increased values and of a desire to improve for better production. We need to keep these facts in mind when we analyze tables like the following or when we hear calamitous stories based upon them.

The Census Bureau comments upon the figures in the Census of 1920 as follows:

> The increase in the number of mortgaged farms in the United States and in the percentage of the total number of farms mortgaged does not necessarily represent any lack of prosperity, since the money is borrowed in many instances for profitable investment in improvements or for the purchase of land. In fact, a large fraction of the total debt doubtless represents the balance due on the purchase price from recent purchasers who have paid a part of the price of the farm and given a mortgage for the rest.

Table 71 and the following chart compare the extent of mortgages on farms operated by the owners for the census years 1890 to 1920.

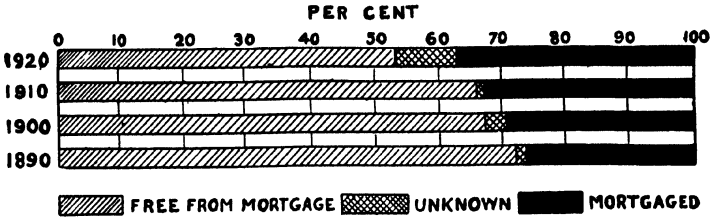


FIGURE 39. — PER CENT DISTRIBUTION OF OWNER-OPERATED FARMS IN THE UNITED STATES, ACCORDING TO MORTGAGE STATUS: 1890–1920

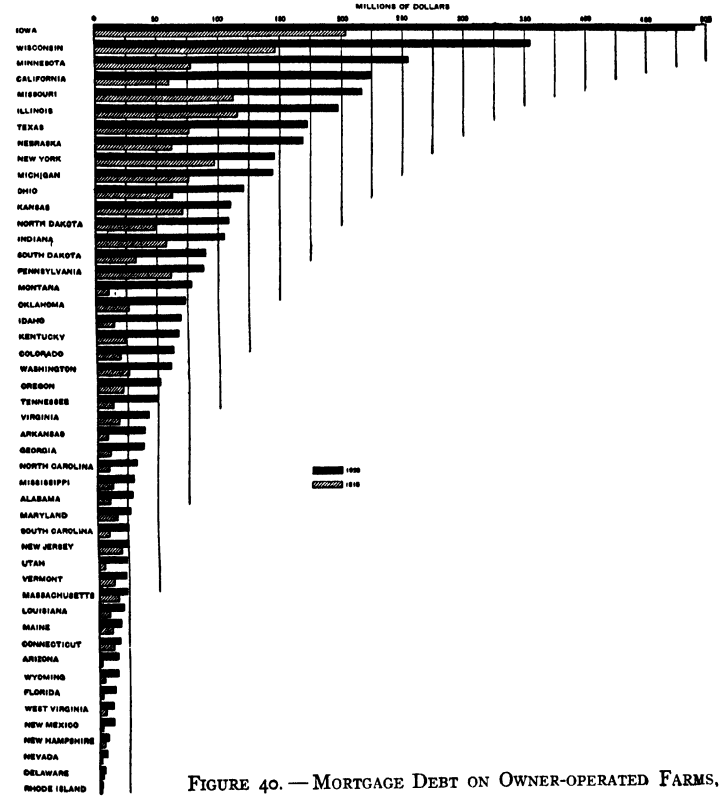


FIGURE 40. — MORTGAGE DEBT ON OWNER-OPERATED FARMS, BY STATES: 1920 AND 1910

TABLE 71. — NUMBER OF OWNED FARMS IN THE UNITED STATES ACCORDING TO MORTGAGE STATUS: 1890–1920

ITEM	FARMS OPERATED BY THEIR OWNERS		OWNED FARM HOMES[1]	
	1920	1910	1900	1890
Total	**3,925,090**	**3,948,722**	**3,638,403**	**3,142,746**
Increase over preceding census	−23,632	310,319	495,657	
Per cent of increase	−0.6	8.5	15.8	
Reported as free from mortgage	2,074,325	2,588,596	2,419,180	2,228,806
Increase over preceding census	−514,271	169,416	190,373	
Reported as mortgaged	1,461,306	1,312,034	1,093,164	874,215
Increase over preceding census	149,272	218,870	218,949	
Unknown (no report)	389,459	48,092	126,059	39,725
Increase over preceding census	341,367	−77,967	86,334	
Per cent of increase	709.8	−61.8	217.3	

Examples

1. What was the percentage of increase or decrease of mortgaged farms in 1920 over 1910?
2. Make similar comparisons with the Census of 1890 and that of 1900.

The amount of the mortgage debt was reported in 1920 for 1,193,047 farms. These had mortgage debts of $4,003,767,192, on property valued at $13,775,500,013. The corresponding figures for 1910 for 1,006,511 farms respectively showed the amount of mortgage debt at $1,726,172,851, on property valued at $6,330,236,951. The average rate of interest was 6.1 per cent in 1920.

[1] The Census Bureau used the term "Owned Farm Homes," prior to 1900.

Examples

1. Find the percentage of total mortgage to total value of farms in 1920 and in 1910.

2. What was the average value of these farms in each year? (For number of farms see Table 71.)

3. What was the average equity which the owner had in his farm in each year?

4. Which division had the largest percentage of mortgage to value of farms mortgaged?

5. Secure the data on farm values and mortgages in your own state and county, and compare the same with the rest of the country.

TABLE 72. — FARM MORTGAGE DEBT, VALUE OF FARMS REPORTING AMOUNT OF DEBT, BY DIVISIONS: 1920 AND 1910

DIVISION AND STATE	VALUE OF FARMS (LAND AND BUILDINGS)		AMOUNT OF DEBT	
	1920	1910	1920	1910
United States	**$13,775,500,013**	**$6,330,236,951**	**$4,003,767,192**	**$1,726,172,851**
GEOGRAPHIC DIVISIONS.				
New England	271,162,739	183,826,183	91,756,058	58,535,508
Middle Atlantic	711,867,559	516,334,528	258,397,005	178,326,219
East North Central	2,959,228,357	1,605,964,728	922,266,312	459,886,968
West North Central	5,414,232,364	2,361,540,675	1,437,337,392	608,480,562
South Atlantic	652,812,215	270,317,105	192,668,718	73,597,258
East South Central	570,595,365	203,125,373	176,102,120	59,769,643
West South Central	1,134,847,511	484,014,790	304,631,634	121,365,670
Mountain	927,906,171	247,994,132	283,423,921	59,364,185
Pacific	1,132,847,732	457,119,437	337,184,032	106,846,838

Examples

1. Observe the increase in rates of mortgages to value between large farms and small ones. What is the rate of difference between the highest and lowest?

2. Observe the increased interest rates on smaller farms. What is the rate of difference between the highest and lowest rates?

3. What do these figures indicate?

TABLE 73. — FARM-MORTGAGE DEBT IN THE UNITED STATES ACCORDING TO VALUE OF FARM, WITH RATIO OF DEBT TO VALUE AND AVERAGE INTEREST RATE: 1920

VALUE GROUP	FARM-MORTGAGE DEBT	RATIO OF DEBT TO VALUE (PER CENT)	AVERAGE INTEREST RATE (PER CENT)
Total	**$4,003,767,192**	**19.1**	**6.1**
Under $5,000	467,449,381	38.7	6.6
Under $2,500	129,263,438	42.2	6.8
$2,500 to $4,999	338,185,943	37.4	6.5
$5,000 to $9,999	703,854,308	35.2	6.2
$5,000 to $7,499	402,781,862	35.7	6.2
$7,500 to $9,999	301,072,446	34.6	6.2
$10,000 to $14,999	573,984,642	34.0	6.0
$15,000 to $19,999	428,312,701	30.7	6.0
$20,000 to $24,999	366,129,944	29.2	5.9
$25,000 to $29,999	215,366,895	28.5	5.9
$30,000 to $34,999	238,533,885	27.3	5.9
$35,000 to $39,999	142,131,377	26.3	5.9
$40,000 to $44,999	156,113,481	25.4	5.8
$45,000 to $49,999	117,925,985	24.2	5.7
$50,000 and over	593,964,593	20.1	5.9

The distribution of farm mortgages among the geographical divisions of the country follows.

TABLE 74. — OWNED FARMS REPORTED AS TO MORTGAGE: 1920

DIVISION	TOTAL	REPORTED AS FREE FROM MORTGAGE	REPORTED AS MORTGAGED	UNKNOWN (NO REPORT)
United States	**3,925,090**	**2,074,325**	**1,461,306**	**389,459**
GEOGRAPHIC DIVISIONS:				
New England	140,160	80,412	53,138	6,610
Middle Atlantic	327,104	179,326	125,216	22,562
East North Central	766,786	382,771	326,313	57,702
West North Central	711,156	278,906	368,158	64,092
South Atlantic	607,089	408,804	118,026	80,259
East South Central	525,808	339,312	124,723	61,773
West South Central	464,328	236,932	162,738	64,658
Mountain	202,515	88,731	97,038	16,746
Pacific	180,144	79,131	85,956	15,057

Examples

1. What divisions had the highest percentage of mortgaged farms in 1910? In 1920?
2. Find the facts for your own state and for your own county.

Farm Expenditures

The growth of farm expenditures for the principal items indicates the increased problems of making farming profitable. While income has increased greatly as already seen, the costs for labor, feed, and fertilizer — the three major items of expense — have also increased greatly. In 1919 the expenditures for labor were $469 per farm, while in 1909 the expense was $223. For fertilizer the amount was $649 per farms reporting, while in 1909 it was $240. The cost of feed per farm was $312 in 1919 and $127 in 1909.

Modern Facilities

The improvement of farm conditions is gauged somewhat by the development of modern facilities for work and for comfortable living, such as the automobile, tractors, telephone, gas and electric light. The Census found that on January 1, 1920 there were 1,979,564 farmers with automobiles; 131,551 with trucks; 229,332 with tractors; 2,498,493 with telephones; 643,899 with water piped into the house; and 452,620 with gas or electric light.

Examples

1. What percentage of all farms was reported in each case?
2. Secure the latest data from the Department of Agriculture on farm improvements.

Coöperative Marketing

The major economic problem of the farmers is the marketing of farm crops and the purchase of farm supplies.

The farmer is about the only producer who has nothing to say about what his product will bring. He produces the crop and takes what he gets, even though it may be below the cost of production. The condition is recognized as bad for the progress of the farm, and various methods of coöperative marketing have been devised.

The Census of 1920 was the first to gather statistics of coöperative marketing. There were found 511,383 farms from which crops were sold, and 329,449 for which supplies were bought, through coöperative marketing. The sales amounted to $721,983,639 and the purchases to $84,615,669.

Examples

1. From what percentage of farms were crops sold by coöperative marketing?

2. For what percentage of farms were purchases made by coöperative purchasing?

3. Secure from the U. S. Department of Agriculture the latest figures on coöperative marketing.

4. Analyze the figures of coöperative marketing for your own state.

Sources for Research

1. The *Abstract of the Fourteenth Census* gives detailed information about farm conditions by states and geographical divisions. The facts for each state may there be found.

2. The special volumes of the United States Census on Agriculture give still more detailed information about every phase of agriculture. Information about each county may be found here.

3. The *Statistical Abstract of the United States* gives summaries of agricultural production each year.

4. The *Yearbook of the U. S. Department of Agriculture* gives each year detailed information of the production of each crop, compared with previous years and also with world production. It also includes

valuable studies of agricultural problems. It is of great value in the study of this chapter.

5. The report of the Secretary of Agriculture gives a brief review of current problems in agricultural conditions and developments.

6. Nearly all of the states maintain Departments of Agriculture whose reports should be secured.

7. The state agricultural college and experiment stations in each state stand ready to give any information about agricultural and rural problems in the state.

8. The Federal Farm Loan Board publishes annually a report showing its operations in providing for the financing of farmers.

CHAPTER VII

TRANSPORTATION AND COMMUNICATION

The development of means of transportation and communication has brought all parts of the world into close relationship. Knowledge is interchanged and products from each part serve the people of all parts. Having secured by this means the necessities, comforts, and luxuries which the world provides, we are thereby made dependent upon the systems of transportation and communication which make it possible. A self-sufficient community living by itself, as in olden days, needed few means of travel or communication. The local community supplied itself without bringing in outside goods, and the products of the community were used in the community. Such communities needed local roads, but these were comparatively unimportant. As population grew and as the people began to interchange products and as desires for other products conducive to comfort or luxury were developed, it became the business of traders to supply what was desired. As products from distant places were sought for more and more to supply new and varied needs, the necessity for new and improved means of transportation followed. Highways were extended and improved roads became a reality; water transportation was developed and made safe; canals were dug as arteries of travel and trade; the invention of the loco-

motive engine made possible the era of railroad transportation; electricity extended the railroad system greatly; motor travel and transport forced forward the paving of highways and linked up otherwise isolated places; the invention of the airplane brought new possibilities as yet only slightly realized for quick transportation; the organization of express and delivery services helped to make the transportation system serve the people more effectively; and the whole has been joined into a world-wide system upon which all people have become dependent.

Communication also kept pace with this interlacing of the world with systems of transportation. Written and printed communications have been delivered by the post in all recorded civilized times. This service has everywhere been a public one carried on by the various governments with arrangements for interchange between countries. It served both for pleasure and for business and, of course, has been indispensable. Without quick means of communication the transportation of goods would work slowly. The Post Office in the United States has extended its facilities to every crossroad in the country. It reaches everywhere that people live, even to the remotest parts. Besides its offices in every city, village, and hamlet, it maintains a vast work of distribution through the railway mail, and rural and city delivery services. The invention of the telegraph ushered in a new era of quick communication, which has been vastly extended by the telephone and the wireless.

The whole world is brought close together and made directly interested in, and in fact dependent upon, the smooth working of the systems of communication as well as transportation. A brief interruption of any of the

activities of trade — local, national, or international — puts a hardship upon all affected. An interruption of communication is considered a calamity likewise, because of the dependence of trade upon it. We pay the price for the necessities, comforts, and luxuries which modern communication and transportation provide, by being made sensitively dependent upon the smooth and uninterrupted workings of the whole machinery by which our needs are supplied.

TRANSPORTATION

Highways

The highway is the most ancient and the most universally needed means of transportation. Until the invention of the locomotive and its applicability to rail transportation was made, the highway was the only extensive means of reaching the interior. By necessity, settlements, and consequently trade, followed the watercourses, for it was out of the question to transport bulky products over long stretches of roads with the vehicles then available. The building of roads was largely in the hands of the local communities, but the need for interstate highways became so apparent even in the early days of the Republic that the National Road was projected and finally built across the Alleghanies and through Ohio and Indiana. It probably would have been extended farther if the railroad had not superseded it.

For over a century in America the highways were left in local control without much stimulus toward good roads except in favored spots. Then the automobile and, later, motor transport forced the highways again to the front and brought forward the era of road improvement. The states gave aid to local communities and supplied expert

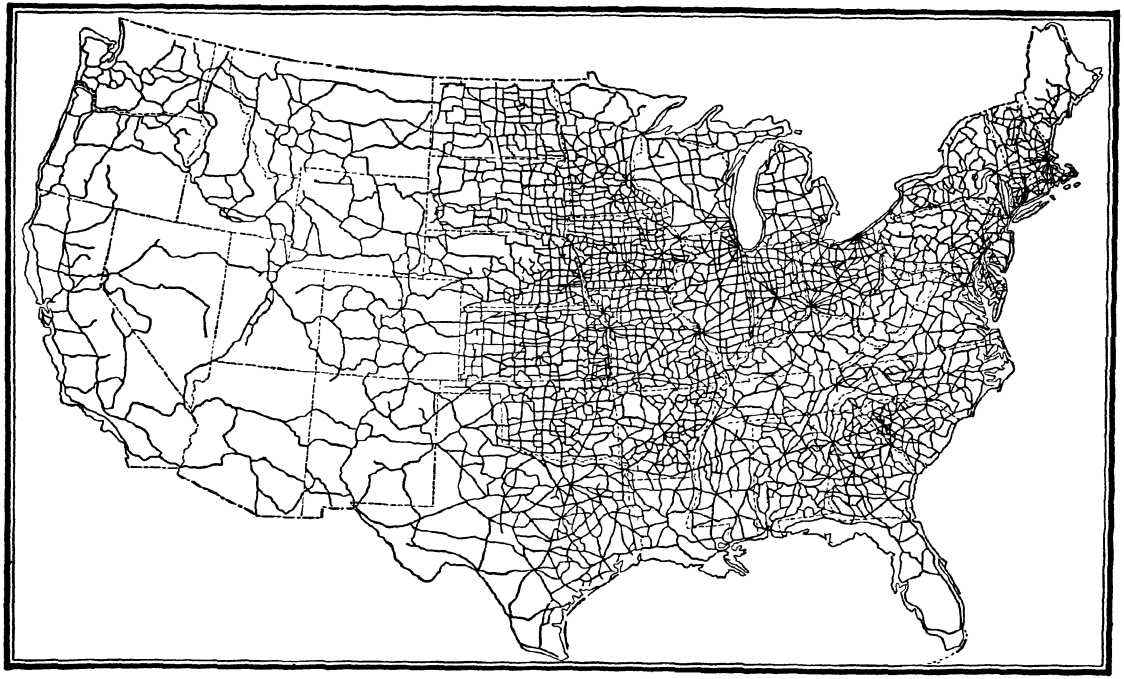


FIGURE 41. — MAP OF APPROVED FEDERAL AID ROADS

engineers and consultants. State-wide systems of improved roads were laid out. Finally in 1916 the Federal Government recognized the necessity of national roads leading from state to state and provided for national aid and expert road engineering. Vast progress has been made since that time in creating a unified system of paved highways throughout the nation and in providing scientific standards for road building.

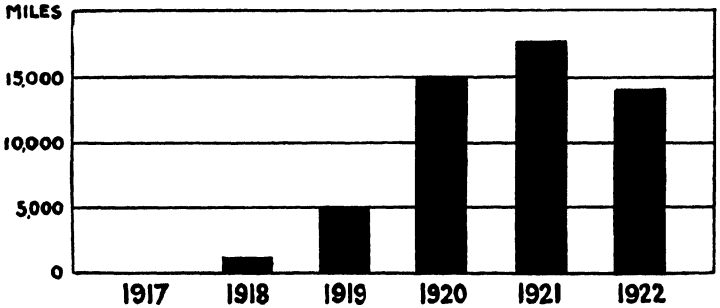


FIGURE 42. — GROWTH OF FEDERAL AID ROAD CONSTRUCTION

An idea of the vastness of the road projects may be gained from statistics. There are nearly 3,000,000 miles of highways in the United States. Of all this great mileage 387,760 miles had been improved by surfacing in 1922. Over 200,000 miles of road were maintained with state aid, and 26,536 miles had been built and 14,772 miles were under construction with federal aid. The approved plans for federal aid call for the building of 180,000 to 200,000 miles, of which in 1923 more than 111,000 miles had been formally selected by the Federal Bureau of Public Roads for construction. The development of roads by states is indicated in the next table.

TABLE 75. — PUBLIC ROADS IN THE UNITED STATES: 1922

STATE	SURFACED	TOTAL, INCL. SURFACED	STATE	SURFACED	TOTAL, INCL. SURFACED	STATE	SURFACED	TOTAL, INCL. SURFACED
	Miles	*Miles*		*Miles*	*Miles*		*Miles*	*Miles*
Alabama	10,420	58,410	Maryland	3,663	14,772	Oklahoma	2,461	134,263
Arizona	1,233	21,227	Massachusetts	6,575	18,868	Oregon	8,050	45,475
Arkansas	3,871	74,866	Michigan	7,186	77,283	Pennsylvania	13,921	90,991
California	14,275	75,889	Minnesota	16,905	107,103	Rhode Island	754	2,274
Colorado	4,598	48,143	Mississippi	5,744	53,085	South Carolina	6,908	61,850
Connecticut	2,206	12,152	Missouri	7,879	111,520	South Dakota	548	115,485
Delaware	448	3,933	Montana	1,772	64,732	Tennessee	9,878	62,546
Florida	6,438	27,643	Nebraska	496	86,556	Texas	14,883	167,685
Georgia	18,339	94,912	Nevada	168	26,057	Utah	2,544	23,047
Idaho	2,982	31,099	New Hampshire	1,692	13,841	Vermont	3,545	14,677
Illinois	11,473	96,326	New Jersey	6,459	14,066	Virginia	7,260	59,080
Indiana	39,857	76,246	New Mexico	1,802	45,549	Washington	12,062	45,816
Iowa	2,585	104,082	New York	18,566	81,878	West Virginia	1,367	35,173
Kansas	1,100	128,551	North Carolina	16,755	68,204	Wisconsin	19,714	78,679
Kentucky	15,436	68,704	North Dakota	710	106,523	Wyoming	440	46,528
Louisiana	2,771	39,803	Ohio	36,068	84,219	United States	387,760	2,941,294
Maine	2,953	21,483						

The cost of highways and the distribution of the burden upon local communities, the states and the nation for one typical year are shown in Table 76.

The amount expended by the Federal Government has been greatly increased since 1919, *the total* expenditure for the seven years — 1917 to 1924 — being about a hundred seventy-five millions of dollars.

Examples

1. How many people are there in each state to each mile of highway?

2. How many miles of road are there to the square mile of territory in each state?

3. Which state had the largest proportion of improved roads in 1922?

TABLE 76. — PUBLIC ROADS: SOURCES OF FUNDS AND DISTRIBUTION: 1919

STATE	FEDERAL	STATE	LOCAL	TOTAL
	Dollars	*Dollars*	*Dollars*	*Dollars*
Alabama	284,430 88	65,002.60	262,979.91	612,413.39
Arizona	66,738.99	1,451,336.71		1,518,075.70
Arkansas	76,874.27	585,193.00	6,218,972.63	6,881,040 00
California	498,795.45	6,568,093 39	79,999 91	7,146,888.75
Colorado	20,000.00	1,775,000.00	500,000.00	2,295,000.00
Connecticut		2,293,397 11	92,536.69	2,385,933.80
Delaware		1,147,080.26	646,464.70	1,793,544.96
Florida				
Georgia	426,704.47		490,710 13	917,414.60
Idaho	410,000.00	850,000 00	540,000.00	1,800,000 00
Illinois		4,403,944.89	2,119,902.13	6,523,847.02
Indiana	236,288.89	400,691.10	565,000 00	1,201,979 99
Iowa		614,090 64	16,158,946.71	16,773,037.35
Kansas	187,586 63	47,500 00	458,046.80	693,133 43
Kentucky	226,395.00	926,200.00	650,713.75	1,803,308.75
Louisiana				
Maine	65,011.60	1,739,118 72	970,374 32	2,774,504.64
Maryland	590,555.28	2,237,184.79	636,767.92	3,464,507 99
Massachusctts	10,119.00	3,619,849.00	589,915 00	4,219,883.00
Michigan	618,218.42	4,245,593.23	1,645,288 54	6,509,100.19
Minnesota	739,138 09	2,690,585.65	4,667,961.47	8,097,685.21
Mississippi	98,000 00	40,000 00	252,000.00	390,000 00
Missouri	100,000 00	684,000 00	440,000 00	1,224,000 00
Montana	14,900 45	396,519 84	228,461.28	639,881.57
Nebraska	358,683.50	1,097,586.24	95,164.98	1,551,434.72
Nevada	179,685.15	342,250.48	105,428.10	627,363.73
New Hampshire	9,574.83	1,360,710 01	511,453.68	1,881,738.52
New Jersey		6,320,000.00	9,000,000.00	15,320,000 00
New Mexico	39,739 12	839,053.56	330,473.32	1,209,266.00
New York	298,938.07	13,714,312.32	10,434,517.70	24,447,768.09
North Carolina	254,731.89	1,010,442 76	452,170.22	1,717,344.87
North Dakota	250,000.00	233,128 47	500,000 00	983,128.47
Ohio	694,921.36	4,603,771.72	5,414,645.28	10,713,338 36
Oklahoma	40,000 00	2,125,000.00	1,386,500.00	3,551,500.00
Oregon	224,851.60	5,922,825.67	243,158.14	6,390,835.41
Pennsylvania	2,141,267 46	16,719,267.44	1,361,645.17	20,222,180.07
Rhode Island	65,000 00	1,131,720 69		1,196,720.69
South Carolina	246,024.08	80,406 25	268,343 57	594,773 90
South Dakota	94,247 41	319,225.91	117,195.84	530,669.16
Tennessee	82,857.91	794,464.09	90,888.52	968,210.52
Texas	442,231 66	649,604.96	3,000,000.00	4,091,836.62
Utah	52,507 23	2,445,238 36	547,284.67	3,045,030.26
Vermont	46,749 52	901,135.70	492,590 41	1,440,475.63
Virginia	146,906.64	2,262,192.18	908,836.01	3,389,934.83
Washington	616,687.30	2,894,969.96	415,355.41	3,927,012.67
West Virginia	325,000.00	480,000.00	985,000.00	1,790,000.00
Wisconsin	204,962.44	3,062,638.89	6,689,434.07	9,957,035.40
Wyoming	244,732.39	770,726.26	64,456.79	1,079,915.44
Total and average	11,730,056.98	106,861,052.85	81,701,583.77	200,292,693.70

4. Describe the system of providing roads in your state. What is the total expenditure for roads in your state and where does the money to pay for them come from?

5. Secure the latest information of mileage and expenditures for public highways.

The Railroad

The first railroad in the United States was built in 1830. It was looked upon with greatest skepticism, and few believed that it would be successful as a means of transport. The revolution which it was about to bring in the nation's affairs was not apparent. Railroad building began in earnest during the decade 1830–1840. There were 2818 miles in 1840; 9021 in 1850; 30,626 in 1860. In spite of the Civil War the mileage had jumped to 52,922 in 1870; and the growth went steadily forward until in 1919 there were 253,152 miles.

The way in which this network of transport facilities was thrown across the country is disclosed in Table 77, which shows the mileage by state from 1860 to 1920.

Examples

1. In what decade was the greatest number of miles of railroads built?

2. In what decade was the greatest percentage of growth of railway mileage?

3. When was the greatest railroad growth in each of the states?

4. Which state has the greatest number of miles of railroad? Which has the least?

5. Compare the mileage in each state with the area and population.

The growth and size of the railroad's task are brought out by the fact that there were 492,430,865 passengers carried in 1890; 971,683,199 in 1910; and 1,269,912,881 in

TABLE 77. — RAILROADS: MILES OF LINE IN SPECIFIED YEARS: 1860-1919

STATE	MILEAGE						
	1860	1870	1880	1890	1900	1910	1919
Ala.	743	1,157	1,843	3,313 87	4,225.84	5,226.16	5,376 62
Ark.	38	256	859	2,195 81	3,359 86	5,305 51	5,091.90
Calif.	23	925	2,195	4,356 11	5,751 04	7,771 89	8,393.00
Colo.		157	1,570	4,176.19	4,587 25	5,532.56	5,582.19
Conn.	601	742	923	1,007.29	1,023 62	1,000 14	1,022.24
Del.	127	197	275	322.69	346 72	334 81	335.39
Fla.	402	446	518	2,470 89	3,299 06	4,431 54	5,221 26
Ga.	1,420	1,845	2,459	4,532 37	5,651.72	7,056.49	7,337 56
Idaho			206	941 44	1,261 23	2,178 63	2,947.21
Ill.	2,790	4,823	7,851	10,213.97	11,002 93	11,878 34	12,122.95
Ind.	2,163	3,177	4,373	5,971 03	6,470 61	7,420 14	7,411.92
Iowa	655	2,683	5,400	8,355 97	9,185 18	9,754 68	9,809.09
Kans.		1,501	3,400	8,806 45	8,719.36	9,006 88	9,384 81
Ky.	534	1,017	1,530	2,746 25	3,059.99	3,526 21	3,902 92
La.	335	450	652	1,758 94	2,824 08	5,553 74	5,231 06
Me.	472	786	1,005	1,338 13	1,915 24	2,248 06	2,294 27
Md.	386	671	1,040	1,231 34	1,376 16	1,426 45	1,440 27
Mass.	1,264	1,480	1,915	2,093 73	2,118 58	2,115 21	2,125 87
Mich.	779	1,638	3,938	7,242 67	8,195 18	9,021 13	8,770 07
Minn.		1,092	3,151	5,466 37	6,942 57	8,668.60	9,097.21
Miss.	862	990	1,127	2,332.03	2,919 90	4,506 16	4,396.12
Mo.	817	2,000	3,965	6,004 10	6,875.04	8,082 74	8,130.39
Mont.			106	2,181 04	3,010 32	4,207 42	5,031 76
Nebr.		705	1,953	5,295 35	5,684 85	6,067 15	6,166 45
Nev.		593	739	924 87	909 35	2,276.66	2,176.70
N. H.	661	736	1,015	1,145 03	1,239 20	1,245 93	1,254 85
N. J.	560	1,125	1,684	2,046 76	2,256 69	2,260 49	2,350.82
N. Y.	2,682	3,928	5,957	7,660 71	8,121 03	8,429 77	8,353.21
N. C.	937	1,178	1,486	3,000 88	3,831 16	4,932 41	5,505 27
N. Dak		65	1,225	1,940 64	2,731.22	4,201 07	5,311 05
Ohio	2,946	3,538	5,792	7,911 51	8,807 27	9,134 46	9,002.57
Okla.				167 96	827 88	5,980 22	6,536.96
Oreg.		159	508	1,427 95	1,723 80	2,284 69	3,314 58
Pa.	2,598	4,656	6,191	8,453 20	10,330 50	11,290 17	11,658 14
R. I.	108	136	210	212 52	211 79	212 14	211 60
S. C	973	1,139	1,427	2,193 60	2,817 93	3,441 74	3,827.06
S. Dak				2,485.89	2,849 83	3,947 65	4,277 46
Tenn.	1,253	1,492	1,843	2,751 87	3,130 95	3,815 97	4,108.25
Tex.	307	711	3,244	8,613 42	9,886 49	14,281.81	16,112 72
Utah		257	842	1,090.14	1,547 42	1,985 94	2,174 63
Vt.	554	614	914	921 49	1,012.11	1,100 48	1,076.76
Va.	1,379	1,486	1,893	3,160.40	3,779 15	4,534 94	4,748 72
Wash.			289	1,783 37	2,913 57	4,875 21	5,545.86
W. Va.	352	387	691	1,327 93	2,228.05	3,600 99	3,982 61
Wis.	905	1,525	3,155	5,583 59	6,539 52	7,475.21	7,561.24
Wyo.		459	512	941 88	1,228.63	1,644.89	1,930.17
Alaska							
Ariz.			349	1,096.64	1,511.89	2,097.31	2,497.54
D. C.				30.24	31.75	35.97	36.42
Hawaii							
Ind. T.			289	1,046.20	1,322.75		
N. Mex.			758	1,324.33	1,752.52	3,032 08	2,974.45
Total	30,626	52,922	93,267	163,597.05	193,345.78	240,438.84	253,152.17

1920. The average journey increased from 24 miles in 1890 to 33.5 in 1910 and to 39.3 miles in 1919. The railroads carried 77 billion tons a distance of one mile in 1890; 255 billion tons for one mile in 1910; and 364 billion tons for one mile in 1919.

The consequence of this development has been to link up the whole vast area of the United States. The railroad made possible the peopling of the continent; it has made democracy workable on so large a scale as the United States by enabling representatives of the people to come together from all parts; it has brought comforts and luxuries to millions; it has also made the people dependent, through the division of labor by communities which it has created, upon regular and unimpeded operation.

Electric Railways

The electric railway has been the latest and most active development. Beginning late in the last century, there was a total of 41,032 miles of single track in 1912; 44,808 miles in 1917; and 43,933 miles in 1922. The electric railway brings into closer union the areas of the larger cities and binds together many smaller communities. It serves the people primarily for short journeys. Over twelve billion passengers were carried on the electric railways in 1922.

Examples

1. What state has the largest development of electric railways? Which has the smallest development?

2. Which has the largest development in proportion to population and area?

3. In which states has the development of electric railways been most active since 1910?

TABLE 78. — ELECTRIC RAILWAYS IN THE UNITED STATES

(Data by the Bureau of the Census)

STATE	MILES SINGLE TRACK OPERATED			STATE	MILES SINGLE TRACK OPERATED		
	1922	1917	1912		1922	1917	1912
New York	4,792.35	4,773.36	4,485 81	West Virginia	422.06	395.15	330.18
Pennsylvania	4,423.08	4,462.11	4,269.53	Rhode Island	402.54	453 61	435.37
Ohio	3,975.84	4,236.11	3,999 22	Alabama	364 50	369.35	308.80
Illinois	3,414 15	3,441.43	3,185.73	Oklahoma	323.81	301.51	251.56
California	3,075.75	3,022.08	2,605.28	Louisiana	304.80	330.59	285.10
Massachusetts	2,689.57	3,055 88	2,950 96	South Carolina	301.40	313.56	228.08
Indiana	2,309 33	2,355.58	2,323 38	New Hampshire	263 46	269.34	268.15
Michigan	1,813.94	1,768 37	1,526.25	North Carolina	215.55	227.63	190.26
New Jersey	1,342.93	1,368.06	1,308 97	Nebraska	206.05	210.99	214.46
Missouri	1,098.23	1,093.65	959 01	Dist. of Col.	198.54	194.87	188.46
Connecticut	1,010 86	1,079 72	993.22	Florida	197.04	183 03	164.84
Iowa	1,001.31	1,015.45	783.87	Idaho	149.46	155 40	129.13
Texas	973.69	949 94	721.42	Arkansas	120.32	121 83	113.72
Washington	953.57	1,021'69	991.17	Vermont	116.11	125.55	120.83
Wisconsin	919.44	901.28	849.11	Montana	111.26	120.92	99.22
Maryland	758 38	774 62	719 74	Delaware	105.87	101.95	99.37
Minnesota	680 89	655 90	538.48	Mississippi	97.91	124.17	118.57
Oregon	612 01	603.13	549.19	Arizona	44.12	52 89	46.24
Kansas	581.20	581.69	493.91	Wyoming	22.84	23.05	22.91
Maine	566.08	571.52	530.49	North Dakota	20.66	24.42	19.18
Virginia	553 67	580.68	561.49	South Dakota	17.20	24.44	21.59
Kentucky	513 05	515.70	502 38	New Mexico	11.00	10.95	10.60
Tennessee	494.53	447.36	360.93	Nevada	4.52	11.56	11.27
Utah	477.60	469.40	260.18				
Georgia	450.60	449.69	417.33	United States	43,933.88	44,808 31	41,032.91
Colorado	430.81	467.16	467.97				

MOTOR VEHICLES

Transportation has been revolutionized several times by new inventions, but never more rapidly or completely than by the development of motor vehicles since 1900. No one can measure the changes that have taken place so as to give any accurate idea of the vastness of the effects which the automobile has brought upon our social and economic life. Beginning shortly after the century opened, the automobile has expanded in numbers at a tremendous rate. This expansion is disclosed in the next table by states.

TABLE 79. — MOTOR VEHICLES: REGISTRATIONS, BY STATES: 1915–1922

(Office of Public Roads and Rural Engineering, Department of Agriculture)

	MOTOR-CAR REGISTRATION					
	1915	1919	1922	1924	1926	1928
Alabama	11,634	58,898	90,052			
Arizona	7,753	28,979	38,034			
Arkansas	8,021	49,450	84,596			
California	163,797	477,450	861,807			
Colorado	28,894	104,865	162,328			
Connecticut	41,121	102,410	152,977			
Delaware	5,052	16,152	24,560			
District of Columbia	8,009	35,400	52,792			
Florida	10,850	55,400	116,170			
Georgia	25,000	137,000	143,423			
Idaho	7,071	42,220	53,874			
Illinois	180,832	478,438	781,974			
Indiana	96,915	227,255	469,939			
Iowa	145,109	364,043	500,158			
Kansas	72,520	228,600	327,194			
Kentucky	19,500	90,008	154,021			
Louisiana	11,380	51,000	102,284			
Maine	21,545	53,425	92,539			
Maryland	31,047	95,634	165,624			
Massachusetts	102,633	247,182	385,231			
Michigan	114,845	325,813	578,210			
Minnesota	93,269	259,741	380,557			
Mississippi	9,669	59,000	77,571			
Missouri	76,462	244,363	392,523			
Montana	14,540	59,324	62,650			
Nebraska	59,000	200,000	256,654			
Nevada	2,009	9,305	12,119			
New Hampshire	13,449	31,625	48,406			
New Jersey	81,848	190,873	342,286			
New Mexico	5,100	18,082	25,473			
New York	255,242	566,511	1,002,293			
North Carolina	21,000	109,017	182,550			
North Dakota	24,908	82,885	99,052			
Ohio	181,332	511,031	858,716			
Oklahoma	25,032	144,500	249,659			
Oregon	23,585	83,332	134,125			
Pennsylvania	160,137	482,117	829,737			
Rhode Island	16,362	44,833	66,083			
South Carolina	15,000	70,143	95,239			
South Dakota	28,724	104,628	125,241			
Tennessee	7,618	80,422	135,716			
Texas	40,000	331,310	526,238			
Utah	9,177	35,236	49,164			
Vermont	11,499	26,807	43,881			
Virginia	21,357	94,100	168,000			
Washington	38,823	148,775	210,716			
West Virginia	13,279	50,203	112,763			
Wisconsin	79,741	236,290	382,542			
Wyoming	3,976	21,371	30,637			
Total	2,445,664	7,565,446	12,238,375			

Examples

1. Which state had the largest number of automobiles per thousand inhabitants?
2. Which state has shown the greatest increase since 1915?
3. Compare the number of automobiles in each state with the estimated wealth of each state.
4. Secure figures for later years.

The use of motor vehicles for business purposes is shown by the registration in 1922 of 69,459 taxicabs and 1,278,804 trucks.

The number of new cars purchased each year is now (1925) about 4,000,000. The automobile business has become one of the largest in the country.

The revenues derived by the community from automobile licenses amounted in 1922 to over $150,000,000, of which over three fourths was devoted to road improvement.

Ocean Transportation

The extent of ocean transportation is a good indication of the drawing together of the peoples of the world in bonds of trade relationship. The number of ships and the passengers and tonnage carried indicate in a general way the reliance of peoples upon other countries. In the year 1922 there were 654,861 passengers carried outward, and 676,068, including immigrants, were brought into this country. The tonnage of ships entering American ports in 1922 was 65,191,013, and outgoing from these ports was 64,838,935.

The ships of the world in 1920 represented a total tonnage of 64,370,786.

Canals

The first canal for navigation in the United States was built in 1793 around a waterfall on the Connecticut River.

The first great canal — the Chesapeake and Ohio — was projected by Washington to connect the West by way of the Ohio River with the Potomac and Chesapeake Bay. It was constructed as far as Cumberland only and, while it served to market great resources of lumber and mineral products, never reached its destination. The Erie Canal, completed in 1825, was the first great success as a means of transportation on a large scale. It connected Lake Erie with the Hudson River and thus brought the trade of the West to the Hudson and the Port of New York. New York State constructed other canals connecting its waterways and reaching its interior resources. Pennsylvania and Ohio also built several canals, but the coming of the railroad stopped the promotion of the canal as a means of internal transportation.

But the canal never ceased to be an important factor. In recent years several gigantic projects to facilitate commerce have been completed. The Suez Canal, completed in 1869, brought the East Indies thousands of miles nearer to Europe and to the Atlantic seaboard of the United States. The Panama Canal, completed in 1910, brought the Pacific ports of America many thousands of miles nearer to New York and Europe. The Sault Ste. Marie Canal opened the way for ships from Lake Huron to Lake Superior to reach the great mineral and lumber resources of the Northwest. The Cape Cod Canal shortened greatly and made safer the route from New York to Boston. The Welland Canal and the canals around the rapids of the St. Lawrence opened up a sea route from the Great Lakes to Europe. The Kiel Canal gave a route through Germany from the North to the Baltic sea. Several new projects, including the Great Lakes, — the St. Lawrence route,

the Great Lakes to the Gulf route, and the intercoastal canal along the Atlantic, — are now under discussion in the United States.

The importance of the two great canals — the Panama and Suez — is indicated by the tonnage passing through them.

TABLE 80. — TONNAGE PASSING THROUGH SUEZ AND PANAMA CANALS

NAME OF CANAL	YEAR	VESSELS	TONNAGE
Suez	1923	4,621	22,730,162
	1924		
	1925		
	1926		
	1927		
Panama	1923	3,967	18,605,786
	1924		
	1925		
	1926		
	1927		

These figures show their significance when compared with the total tonnage of all traffic of the United States.

One of the original purposes of the canal was to reach the resources in the interior away from watercourses. The railroad made that in the main unnecessary. Modern canals are built to shorten ship routes or to get around waterfalls or other obstruction. They serve immensely the cause of better living by bringing the world closer and more conveniently into touch with all of its parts.

Examples

1. Find the total tonnage entering and leaving the United States in the latest years for which information is available.

2. Find the latest figures for the traffic through the Panama and Suez canals and compare the growth of each.

COMMUNICATION

The Post Office

The Post Office has been developed as a means of sending personal communications and of transacting business. It is a promoter of education and commerce. It enables people to send personal and business messages, and to secure newspapers, magazines, and other means of instruction. In the words inscribed on the Post Office at Washington it is:

Carrier of news and knowledge
Instrument of trade and industry
Promoter of mutual acquaintance
Of peace and good will among men and nations

The Post Office is in every country a public enterprise conducted by the government. It has always been a publicly owned and managed utility in this country, conducted for service to the people and not for profit. Its educational value is so important to all the people that it is deemed wise to make the rates as low as possible and to extend its service to every citizen of the country. It does not make money, and if it should ever show a considerable profit, the rates would doubtless be reduced to increase and widen its public service.

The vastness of the postal service is indicated by the sale of nearly 14 billion stamps and over 1 billion postal cards in 1921, with a gross revenue of $463,491,274. Mail was carried over 434,349 miles of postal routes; there were 52,618 post offices, 2161 cities with delivery service employing 38,532 men, and 43,642 rural delivery routes covering a mileage of 1,163,896 miles.

Table 81 indicates the growth of the system.

TABLE 81. — PROGRESS OF THE POSTAL SERVICE: 1790–1920

YEAR	NUMBER OF OFFICES	MILES OF POSTAL ROUTES	REVENUE
1800	903	20,817	280,806
1810	2,309	36,406	551,755
1820	4,500	72,492	1,111,761
1830	8,450	115,176	1,919,314
1840	13,468	155,739	4,543,522
1850	18,417	178,762	5,499,985
1860	28,498	240,594	8,518,067
1870	28,492	231,232	14,556,159
1880	42,989	343,888	33,315,479
1890	62,401	427,990	60,882,098
1900	76,688	500,989	102,354,579
1910	59,580	447,998	224,128,658
1920	52,638	433,668	437,150,212

CITY AND RURAL DELIVERY

In 1885 there were 45 city delivery services in operation in the United States with 757 carriers. By 1890 the number of cities had risen to 454 and the carriers to 9066. In 1920 there were 2086 cities with delivery service and 36,142 carriers, and the total expense was $87,830,428. Rural delivery was started in 1897, when 85 routes were put into operation with 85 carriers covering 1843 miles of road. There were 32,110 routes covering 721,237 miles by 1905; 41,079 routes covering 993,068 miles in 1910; 43,866 routes covering 1,067,674 miles in 1915; and 43,445 routes over a mileage of 1,151,832 in 1920.

Another evidence of the expansion of this vital public service is found in the growth of the railway mail service, which, in fact, constitutes a post office on wheels, with its facilities for promptly distributing mail to the four corners of the country. In 1881 mail was carried on 91,569 miles

TABLE 82. — CITY DELIVERY SERVICE

YEAR	CITY DELIVERY OFFICES	CARRIERS	ANNUAL COST OF SERVICE
1890	454	9,066	7,976,202
1891	519	10,130	9,072,160
1892	568	10,737	9,966,892
1893	610	11,625	10,683,575
1894	610	11,736	11,229,436
1895	604	12,714	12,135,544
1896	627	12,834	12,713,861
1897	629	12,931	12,827,396
1898	688	13,696	13,387,506
1899	735	14,256	13,905,800
1900	796	15,322	14,512,190
1901	866	16,389	15,752,600
1902	933	17,787	17,123,310
1903	1,032	19,542	19,337,986
1904	1,100	20,758	20,561,208
1905	1,144	21,778	20,919,078
1906	1,184	22,965	21,980,632
1907	1,240	24,577	23,170,203
1908	1,330	26,352	26,258,039
1909	1,440	27,620	29,738,123
1910	1,492	28,715	31,683,591
1911	1,541	29,168	32,970,451
1912	1,621	29,962	34,152,517
1913	1,675	30,923	36,600,544
1914	1,759	32,292	40,398,621
1915	1,808	32,902	42,458,003
1916	1,864	34,114	43,136,818
1917	1,948	34,592	48,047,712
1918	1,992	34,593	49,995,450
1919	2,018	35,024	59,527,296
1920	2,086	36,142	74,932,500
1921			
1922			
1923			
1924			
1925			
1926			
1927			

of railways and there were 3177 railway mail clerks. In 1890 the railway mail mileage was 154,779 and the clerks numbered 5836. In 1900 the mileage had risen to 179,982 and the clerks to 8695. In 1920 the mileage was 232,358 and the clerks numbered 20,407.

TABLE 83. — RURAL DELIVERY SERVICE

YEAR	ROUTES	MILEAGE	ANNUAL COST
	Number		*Dollars*
1897	82	1,843	14,840
1898	153	2,960	50,241
1899	412	8,929	150,012
1900	1,259	28,685	420,433
1901	2,761	100,299	1,750,321
1902	8,298	186,252	4,089,041
1903	15,169	332,618	8,051,599
1904	24,566	552,725	12,645,275
1905	32,110	721,237	20,864,885
1906	35,766	820,318	25,011,625
1907	37,728	883,117	26,661,555
1908	39,277	891,432	34,371,939
1909	40,628	979,541	35,661,034
1910	41,079	993,068	36,914,769
1911	41,656	1,015,023	37,125,630
1912	42,199	1,021,492	41,859,422
1913	42,805	1,038,076	45,642,766
1914	43,652	1,060,679	47,377,070
1915	43,866	1,067,674	52,565,811
1916	42,927	1,083,070	51,952,326
1917	43,464	1,112,556	52,420,000
1918	43,453	1,127,110	52,195,848
1919	43,210	1,143,467	65,448,230
1920	43,445	1,151,832	75,562,424
1921			
1922			
1923			
1924			
1925			
1926			
1927			

Examples

1. Compare the number of post offices with the total population at each decade.

2. Compare the miles of postal routes with the total population at each decade.

3. What was the expenditure per capita at each decade?

4. When was the greatest expense of rural delivery in number of routes and in miles of service? What was the average length per route in selected years?

5. What was the cost per route in selected years?

6. When was the greatest expense of city delivery service in number of offices, carriers, and cost?

7. Estimate the savings in your city in time and cost to the people by delivering the mail.

8. Account for the decrease in the number of post offices between 1890 and 1920.

9. Compile the latest data on each of the tables relating to the postal system.

The Telegraph and Telephone

The invention of the telegraph in 1836 brought a new era in communication. The written message sent by post was slow in delivery, whereas the telegraph made the transmission instantly. Messages could be exchanged in a few moments between distant cities. It was reasonable that people would use the quicker method for all brief communications requiring quick responses. By 1870 the use of the telegraph had become so general that 9,157,646 messages were sent; there were 29,215,509 in 1880, 63,167,783 in 1900, and 90,000,000 in 1912. The number of messages in 1924 exceeded a hundred and fifty million, or nearly one and a half for every person in the country.

Cable communication for world business also became extensive, there being 2,913,250 cable messages in 1917.

In 1917 there were 51,574 people engaged in providing telegraph and cable service in this country.

The telephone was invented in 1876 and almost immediately expanded into wide use. In 1902 there were 2,371,044 telephones; in 1917 the number of telephones had reached 11,716,520 and the estimated number of local talks was over twenty-six billion and a half, and in 1922 the number of telephones reached 14,347,395.

The telegraph and telephone systems are under private management in this country. Outside of this country these services are quite generally in the hands of the government and are run either as a part of, or in close coöperation with, the post-office department. In the United States a considerable portion of the service was taken over and managed by the Federal Government during the World War.

Examples

1. Compare the number of telephones in each state with the population.
2. How many telephones to each thousand people in each state?
3. Secure the latest data available.

Express Service

To facilitate the interchange of goods, express companies have been organized to collect, arrange for shipment, and make delivery of goods usually of small bulk. In 1920 these companies shipped goods over 237,699 miles of railway, 2,992 miles of electric railways, 23,371 miles of steamboat lines, and 193 miles of stage routes.

In 1910 the Federal Government entered into the delivery of goods through the parcel post. The growth of this service has been phenomenal. It is world-wide and

TABLE 84. — TELEPHONES IN THE UNITED STATES BY STATES: 1922

STATE	TELEPHONES	STATE	TELEPHONES	STATE	TELEPHONES	STATE	TELEPHONES
	Number		*Number*		*Number*		*Number*
Alabama	84,401	Iowa	533,347	Nevada	10,313	South Carolina	54,078
Arizona	24,353	Kansas	354,251	New Hampshire	68,874	South Dakota	101,555
Arkansas	99,490	Kentucky	201,545	New Jersey	383,496	Tennessee	171,413
California	763,338	Louisiana	87,354	New Mexico	18,342	Texas	462,424
Colorado	150,652	Maine	113,725	New York	1,780,563	Utah	53,261
Connecticut	205,902	Maryland	153,790	North Carolina	116,129	Vermont	54,530
Delaware	23,534	Massachusetts	687,700	North Dakota	77,586	Virginia	155,490
District of Columbia	102,231	Michigan	508,140	Ohio	962,837	Washington	238,275
Florida	79,657	Minnesota	424,777	Oklahoma	222,889	West Virginia	116,081
Georgia	136,334	Mississippi	63,761	Oregon	146,847	Wisconsin	429,949
Idaho	48,745	Missouri	550,980	Pennsylvania	1,085,651	Wyoming	24,949
Illinois	1,283,449	Montana	55,115	Rhode Island	92,766	United States	14,347,395
Indiana	508,726	Nebraska	273,500				

the facts indicate the dependence of all countries upon each. In 1921 there were 4,769,301 parcels sent to foreign countries and 824,177 received from foreign countries and delivered. Seventy-seven countries were reached. Germany received the largest number with 1,340,518 packages, and the smallest number — 2 parcels — were sent to the Canary Islands.

Sources for Research

1. The *Statistical Abstract of the United States* gives annually the latest compiled statistics of highways, railroads, ocean transportation, postal service, and other subjects of this chapter.

2. Each state has a State Highway Department which issues annual reports and gives information of highway developments. Statistics and road maps may generally be secured by writing to this department.

3. The *Annual Report of the Federal Bureau of Public Roads* gives a summary of federal work in road construction and of the experimental work carried on.

4. The Interstate Commerce Commission collects complete information of the operation of railroads. The annual report of this body should be secured for class use.

5. Each state has a Railroad Commission or a Public Service Commission which gathers detailed facts of the railways and the public utilities of the state.

6. The *World Almanac* and the Chicago *Daily News Almanac* are ready reference sources for many of the matters carried by this chapter.

7. The *Report of the Postmaster General* gives in detail the operations of the postal system.

CHAPTER VIII

WORLD COMMERCE

We see in the modern system the ramification of world-wide commerce; trade reaches the farthest corners of the earth. Each locality sends goods to other localities and receives in return the goods which it needs. Each country draws from other countries some products which it needs and sends to other countries some products in return. The dependence of each country upon other countries for products is so intimate that the welfare, prosperity, and peace of all people is dependent upon the operations of commercial intercourse between nations.

To bring the dependence of the United States upon the world more concretely before us, the next tables show the value of goods sent to and received from the different grand divisions of the world for a period of ten years.

Examples

1. Arrange the grand divisions for each year in the order of the amount of imports and exports.

2. Find the corresponding figures for the years following those given.

3. Which continent showed the greatest increase for the last period of five years as compared with the first five?

4. With which continents is our trade likely to increase most rapidly in the future?

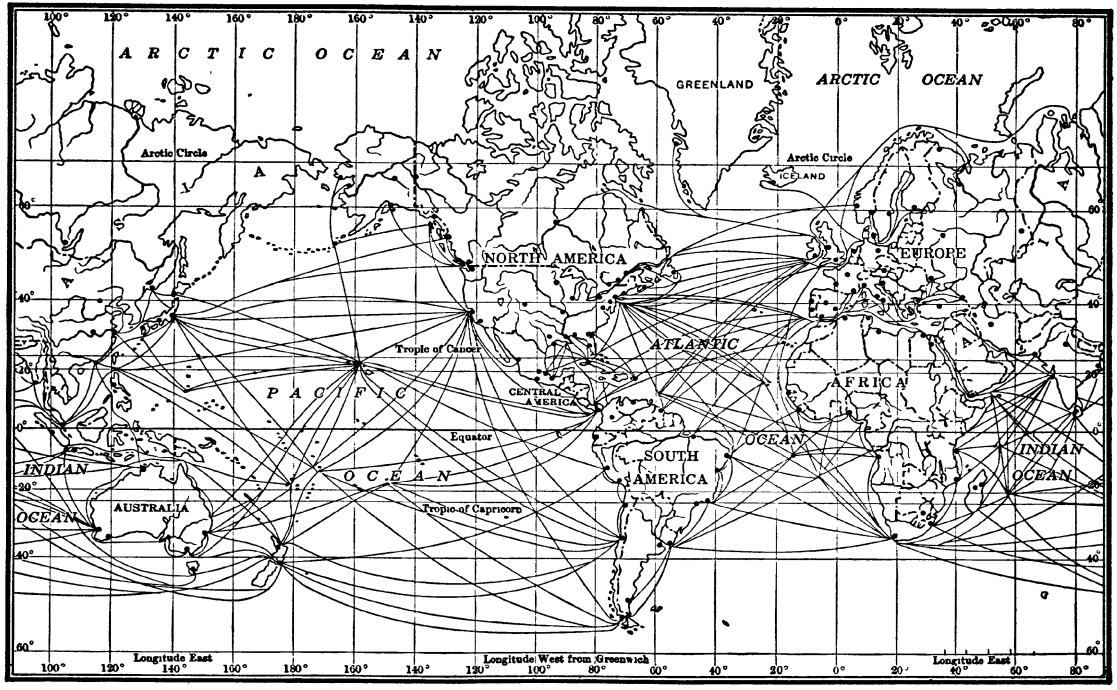


FIGURE 43.—TRADE ROUTES OF THE WORLD

TABLE 85. — FOREIGN TRADE WITH GRAND DIVISIONS: 1912–1921

(*a*) *Europe*

	EXPORTS	IMPORTS
	Dollars	*Dollars*
1912	1,467,451,834	900,003,944
1913	1,499,573,363	864,666,103
1914	1,339,295,916	783,517,509
1915	2,573,408,150	546,352,567
1916	3,813,278,324	633,316,886
1917	4,062,458,190	551,144,600
1918	3,858,697,768	318,121,271
1919	5,187,666,363	750,528,389
1920	4,466,090,927	1,227,842,745
1921	2,363,898,936	764,942,003
1922		
1923		
1924		
1925		
1926		
1927		

(*b*) *North America*

	EXPORTS	IMPORTS
	Dollars	*Dollars*
1912	573,298,563	373,809,916
1913	601,176,159	389,814,744
1914	481,588,221	441,400,758
1915	558,803,012	509,458,281
1916	924,553,649	658,438,120
1917	1,260,974,265	871,826,154
1918	1,325,486,350	974,615,243
1919	1,295,791,866	1,157,773,965
1920	1,929,162,758	1,662,663,071
1921	1,129,579,244	754,849,122
1922		
1923		
1924		
1925		
1926		
1927		

TABLE 85. — *Continued*

(*c*) *South America*

	EXPORTS	IMPORTS
	Dollars	*Dollars*
1912	138,944,930	233,731,935
1913	146,514,635	198,259,005
1914	91,013,339	229,520,375
1915	144,128,681	322,282,189
1916	220,266,818	427,609,562
1917	311,893,023	598,974,902
1918	302,709,610	610,931,072
1919	441,747,728	687,525,388
1920	623,916,990	760,999,295
1921	273,325,393	295,622,950
1922		
1923		
1924		
1925		
1926		
1927		

(*d*) *Asia*

	EXPORTS	IMPORTS
	Dollars	*Dollars*
1912	116,383,053	246,276,758
1913	126,122,651	281,407,363
1914	99,193,210	266,864,028
1915	149,706,033	305,524,008
1916	364,959,155	516,704,047
1917	431,261,460	758,237,164
1918	445,501,200	853,374,521
1919	701,164,787	1,041,444,129
1920	771,748,562	1,283,725,317
1921	486,098,731	565,700,395
1922		
1923		
1924		
1925		
1926		
1927		

TABLE 85. — *Concluded*

(*e*) *Africa*

	EXPORTS	IMPORTS
	Dollars	*Dollars*
1912	27,690,064	25,640,017
1913	28,928,808	23,729,760
1914	25,323,823	19,660,971
1915	37,145,234	34,638,491
1916	54,010,506	61,893,338
1917	51,383,656	73,063,939
1918	59,197,619	85,506,462
1919	97,918,385	112,187,646
1920	165,661,771	150,285,194
1921	72,846,550	40,372,522
1922		
1923		
1924		
1925		
1926		
1927		

(*f*) *Oceania*

	EXPORTS	IMPORTS
	Dollars	*Dollars*
1912	75,449,549	38,610,485
1913	81,702,676	34,719,505
1914	77,209,541	48,312,360
1915	91,479,767	60,341,159
1916	105,572,649	93,673,382
1917	115,542,003	99,221,196
1918	157,494,998	188,664,141
1919	196,136,861	154,905,416
1920	271,435,299	192,965,868
1921	159,282,502	87,660,578
1922		
1923		
1924		
1925		
1926		
1927		

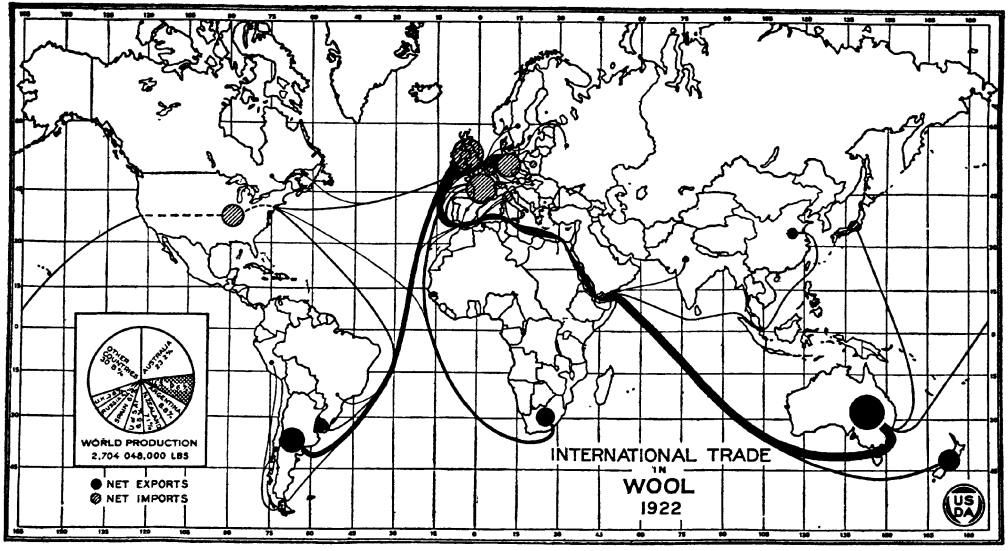

INTERNATIONAL TRADE
IN
WOOL
1922
WORLD PRODUCTION
2,704 048,000 LBS
NET EXPORTS
NET IMPORTS
USDA

FIGURE 44

These figures indicate that the commerce of this country is considerable even with the smallest of the grand divisions. The trend from 1912 to 1921 shows how war changed the currents of trade as countries sought new markets and new sources of supply. If we should analyze still further, we would find how the advance of science and invention creates new demands for the world's supplies. The growth of the electrical industry made copper and platinum essential products. The automobile industry created a tremendous demand for rubber. The discovery of the virtue of fertilizing materials for lands created great demands for potash and nitrogen. The desires for chewing gum and candies brought chicle, cocoa, and chocolate products into great demand. The list could be expanded to cover almost every commodity of commerce. Medical science has made many discoveries which have stimulated trade between nations. Doubtless hundreds of plants, minerals, and other substances are awaiting the discoveries of science to spring into world demand as cotton, flax, cocoa, tobacco, chicle, and quinine have heretofore been made to serve the needs or the folly of men.

We shall now examine the production and distribution of some of the most essential products. Let us begin with the most important of all products — wheat. Some wheat is produced in each state in the United States, but the bulk of the wheat of the country is grown in Kansas, Nebraska, Oklahoma, North Dakota, Minnesota, Illinois, Ohio, Indiana, Pennsylvania, Washington, and Missouri. Massachusetts produces practically none to feed its millions, while Kansas produced 128,000,000 bushels in 1921, or 72 bushels per capita. Likewise by countries wheat is distributed unevenly. It is produced principally in the

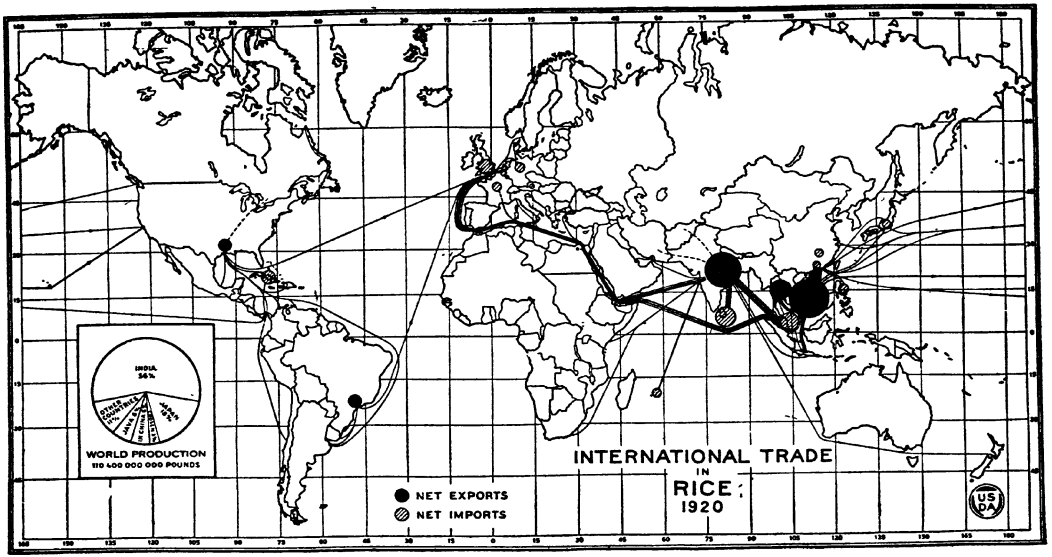

INTERNATIONAL TRADE
IN
RICE:
1920
NET EXPORTS
NET IMPORTS
WORLD PRODUCTION
110 000 000 000 POUNDS
INDIA
56%
JAPAN
20%
CHINA
FRANCE
ITALY
SPAIN
EGYPT
U.S.A.

FIGURE 45

United States, Canada, Argentine, France, British India, Italy, Spain, and Russia. In 1921–22 only four countries exported considerable quantities of wheat — British India, Canada, Argentine, and the United States. Most of the countries of the world imported wheat, and the imports into France, Italy, Belgium, and the United Kingdom were especially heavy; the last named imported over 212,000,000 bushels.

Sugar offers the next example of mutual dependence. Sugar is produced principally in Cuba, Germany, the United States, British India, Java, Brazil, Czecho-Slovakia, the Philippines, and Hawaii. Heavy exports were made from the Philippine Islands, the West Indies, and Brazil, and heavy imports were made into the United States, United Kingdom, British India, France, Canada, Japan, and China.

Cotton is produced principally in the United States, which raises more than half the world's supply and in British India, Egypt, and Brazil. It is exported to all countries, the exports being especially heavy to the United Kingdom, Japan, and France. Coal is found and produced in large quantities in Great Britain, United States, Germany, France, Belgium, Austria, and Japan. Many countries have enough for their own use, but others, notably Italy, must depend upon importation. Petroleum is found in a few countries only and is the object of selfish national ambitions. The bulk of the product is from the United States, Russia, Asia Minor, India, and Mexico. The rest of the world must depend upon importing this product so vital to industrial development.

The examples might be extended to show world dependence upon Russia for platinum; upon East Indies and

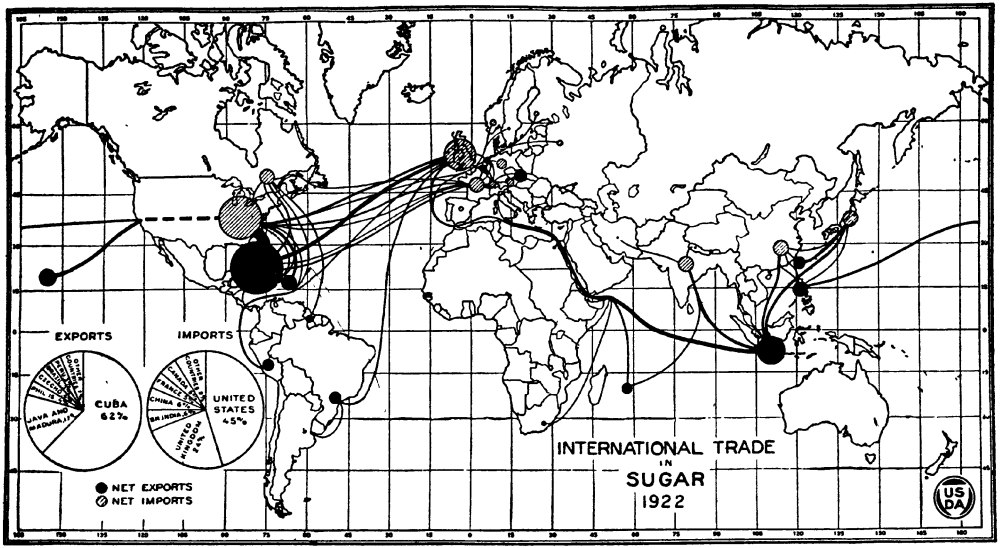

EXPORTS
IMPORTS
CUBA 62%
JAVA AND MADURA 23%
PHILIPPINES 5%
PUERTO RICO 4%
HAWAII 3%
OTHER 3%
UNITED STATES 45%
UNITED KINGDOM 14%
BRITISH INDIA 8%
CHINA 6%
FRANCE 5%
NETHERLANDS 5%
DOMINICAN REP. 4%
OTHER 10%
NET EXPORTS
NET IMPORTS
INTERNATIONAL TRADE
IN
SUGAR
1922
USDA

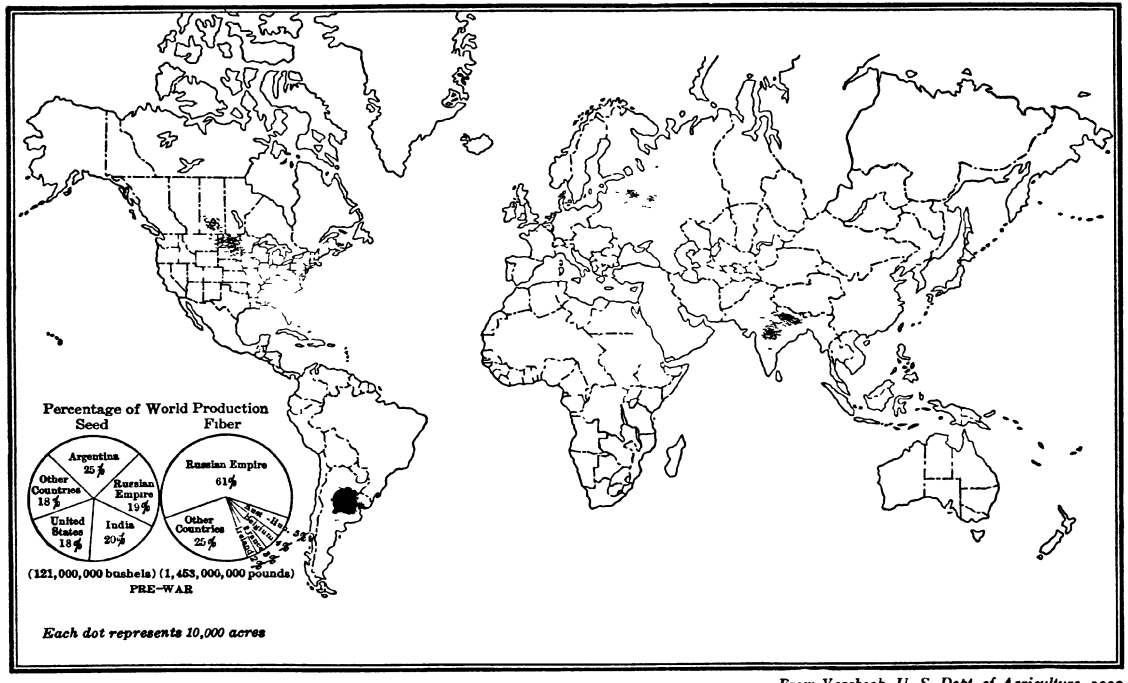
FIGURE 46

Brazil for rubber; upon the United States for tobacco; upon Japan, China, and East India for tea; upon Brazil for coffee; upon Bolivia and the Malay states for tin; upon the United States for copper; upon France, Italy, and Japan for silk; upon Chile for nitrates; upon Central America for bananas; and upon Germany for potash. Thousands of products essential to life, welfare, or progress of people are found in different countries and are distributed by the system of world commerce to many parts of the world. As science, invention, and standards of living advance, more and more products will be sought and found in many places and brought for utilization from the uttermost parts of the earth.

"Our modern wealth," said Emerson, "stands on a few staples, and the interest nations took in our war [the Civil War] was exasperated by the importance of the cotton trade. And what is cotton? One plant out of some two hundred thousand known to botanists vastly the larger part of which are reckoned weeds. What is a weed? A plant whose virtues have not yet been discovered — every one of the two hundred thousand probably yet to be of utility in the arts. As Bacchus of the vine, Ceres of the wheat, as Arkwright and Whitney were the demi-gods of cotton, so prolific time will yet bring an inventor to every plant."

The significance of the facts of international commerce is that people should realize their dependence upon products of the whole world and, consequently, upon people in all countries and should coöperate for world welfare; that nations should cease the grasping of the resources of weaker countries and coöperate for their use by all.

Not only does trade link the nations together but travelers



From Yearbook, U. S. Dept. of Agriculture, 1922

FIGURE 47. — WORLD FLAX ACREAGE

from each country reach all other countries in considerable numbers. During one single year (1921) 222,712 Americans returned to the country from trips abroad and 172,935 aliens came to this country on business or pleasure. During the same year 178,313 aliens, other than immigrants who had been in this country, returned to their homes.

We do not have statistics to show the ownership of property in foreign lands by Americans, but it reaches enormous proportions. All together these facts show how clearly the countries of the world are knit together and how disasters in one country affect all.

The search for needed products in far-off lands is not a modern phenomenon. The history of the last four hundred years is full of such activities. The search for a sea route to India was an effort to bring the spices of the East to the European market. The search for furs sent the Hudson Bay Company's representatives all through the Northwest and Canada. The lure of silver and gold took Cortez into Mexico and Pizarro into Peru as conquerors. The same lure caused the settlement of California, South Africa, and the Yukon. The British East India Company was a powerful agency in extending British power in the East Indies by developing trade with those parts. The War of 1812 was fought because our ships and our trade were interfered with by arbitrary order of Great Britain; we claimed the right to carry on trade unmolested. The need for cotton from the Southern States of America nearly caused England to take part in our Civil War on the side of the South because England's workers were unemployed due to the lack of raw cotton. The objectives of the military operations of the World War were generally the possession of the source of some essential product.

Another evidence of interrelationship of nations is found in the use of such great connecting waterways as the Panama Canal by the people of different countries. The ships of twenty-nine countries have used the Canal in the last seven years. The figures of tonnage carried by the ships of each country are shown in the next table compiled by U. S. Department of Commerce from the report of the Governor of the Panama Canal.

Materials of Commerce

The principal products imported into and exported from the United States are listed in Table 87.

There are many hundreds of specific materials and articles transferred from country to country, but all materials are classified in large groups as follows: crude materials for use in manufactures; foodstuffs in crude condition and food animals; foodstuffs wholly or partly manufactured; manufactures for further use in manufacturing; manufactures ready for consumption. Figures of exports and imports of these classes of materials have been kept since 1820, and these figures are given in Table 88 for selected years. These tables should be studied to see the trend of each of these groups.

It is evidence of social and economic strength to import raw materials, unless obtainable in the country, and to export finished products. We should, therefore, determine from this table whether we are sending raw materials out of the country to be manufactured abroad and perhaps sold back to us in the form of manufactured products, or whether we are importing raw materials from abroad to be worked up into finished goods for sale at home or abroad.

TABLE 86. — PANAMA CANAL: COMMERCIAL VESSELS PASSING THROUGH FROM ITS OPENING TO JUNE 30, 1921, BY NATIONALITY AND WEIGHT OF CARGO

NATIONALITY	1915	1916	1917	1918	1919	1920	1921	TOTAL
	Long tons	*Long tons*	*Long tons*	*Long tons*	*Long tons*	*Long tons*	*Long tons*	*Long tons*
Belgian					464	406	12,700	13,570
Brazilian						8,916	6,700	15,616
British	2,200,514	1,570,660	3,393,750	2,615,675	1,876,939	2,830,268	3,738,257	18,226,063
Chilean	50,879	53,573	184,446	153,259	161,340	104,738	61,737	769,972
Chinese				13,417	13,421	13,700	14,400	54,938
Colombian						27		27
Costa Rican			3,069	2,091	1,137		2,112	8,409
Cuban			7,370				1,200	8,570
Danish	116,603	94,950	242,567	420,063	325,277	42,533	322,059	1,564,052
Dutch	26,402	61,959	314,203	233,063	119,297	128,442	216,488	1,099,854
Ecuadorian					72			72
Finnish							7,101	7,101
French	13,600	7,176	36,680	159,859	286,812	125,249	132,836	762,212
German						59,239	73,837	133,076
Greek				5,741	8,301			14,042
Honduran		321						321
Italian	900		5,700	13,793		63,441	47,988	131,822
Japanese	42,600	117,780	446,358	407,399	503,427	726,338	758,617	3,002,519
Jugo-Slav							8,325	8,325
Mexican			22,545	253	142		3,785	26,725
Nicaraguan	6							6
Norwegian	166,522	229,368	597,581	1,090,823	577,679	404,323	637,887	3,704,183
Panaman			135			872	1,500	2,507
Peruvian	8,202	62,210	159,609	143,344	121,524	119,418	105,322	71,629
Portuguese						10,775		10,775
Russian	21,030	24	3,230	7,059	8,340	12,867	11,343	63,893
Spanish			71,080	35,394	10,047	101,563	143,076	361,160
Swedish	53,292	47,236	94,515	132,521	143,516	74,244	128,919	674,243
United States	2,187,904	848,857	1,475,725	2,098,277	2,758,886	4,547,140	5,163,025	19,079,814
Total	4,888,454	3,094,114	7,058,563	7,532,031	6,916,621	9,374,499	11,599,214	50,463,496

TABLE 86. — *Continued*

NATIONALITY	1922	1923	1924	1925	1926	1927	TOTAL
	Long tons	*Long tons*	*Long tons*	*Long tons*	*Long tons*	*Long tons*	*Long tons*
Belgian							
Brazilian							
British							
Chilean							
Chinese							
Colombian							
Costa Rican							
Cuban							
Danish							
Dutch							
Ecuadorian							
Finnish							
French							
German							
Greek							
Honduran							
Italian							
Japanese							
Jugo-Slav							
Mexican							
Nicaraguan							
Norwegian							
Panaman							
Peruvian							
Portuguese							
Russian							
Spanish							
Swedish							
United States							
Total							

TABLE 87. — VALUE OF CHIEF UNITED STATES EXPORTS AND IMPORTS

(a) Domestic Exports, Years Ended June 30

ARTICLE	1923	1924	1925	1926	1927
	Dollars	*Dollars*	*Dollars*	*Dollars*	*Dollars*
Cotton, raw	658,982,855	903,975,146			
Mineral oils, refined	324,723,878	356,658,290			
Autos and parts	132,000,000	197,000,000			
Tobacco, leaf	145,625,037	166,440,904			
Copper, and manufactures of	113,378,435	143,610,964			
Lard, including neutral	120,018,320	132,332,478			
Coal	138,215,110	128,333,945			
Wheat flour	83,991,002	88,201,842			
Wheat	192,015,328	87,712,501			

ARTICLE	1923	1924	1925	1926	1927
	Dollars	*Dollars*	*Dollars*	*Dollars*	*Dollars*
Fruits	71,253,050	84,518,816			
Boards, etc.	68,648,713	82,631,713			
Cotton cloth	86,517,398	72,844,790			
Machinery, electric	55,531,636	68,996,308			
Machinery, agricultural	37,734,024	60,904,888			
Hams, shoulders, cured	55,204,627	56,252,287			
Bacon	59,052,579	50,950,504			
Leather	44,442,241	46,003,967			

(b) Imports of Foreign Goods, Years Ended June 30

ARTICLE	1923	1924	1925	1926	1927
	Dollars	*Dollars*	*Dollars*	*Dollars*	*Dollars*
Sugar, cane	365,101,105	373,361,058			
Silk, raw	405,796,394	350,028,136			
Coffee	181,639,414	206,546,254			
Rubber, crude	169,108,499	155,234,385			
Paper, newsprint	86,311,528	101,188,493			
Copper	89,073,057	100,108,314			
Cotton goods	93,374,062	92,066,804			
Mineral oil	75,579,319	91,405,964			
Furs, and manufactures of	87,277,268	82,256,526			
Other hides and skins	140,390,780	80,852,205			
Wool, including mohair	162,094,897	77,728,622			
Jute, and manufactures of	83,692,260	75,293,349			

ARTICLE	1923	1924	1925	1926	1927
	Dollars	*Dollars*	*Dollars*	*Dollars*	*Dollars*
Gems	81,833,708	73,155,143			
Wood pulp	74,000,000	71,000,000			
Tin	53,557,414	68,390,007			
Fertilizers	63,381,480	66,169,950			
Tobacco, unmanufactured	69,000,000	60,000,000			
Vegetable oils	64,478,622	57,782,806			
Oil seeds	67,325,841	55,654,007			
Woolen goods	54,810,596	52,842,643			
Flax, hemp, & manufactures of	48,304,438	52,230,946			
Cotton, raw	60,639,913	43,761,034			
Fruits	44,649,823	42,058,817			
Silk goods	39,554,553	40,835,781			

TABLE 88. — UNITED STATES EXPORTS AND IMPORTS, BY CLASSES OF MATERIALS

(a) *Exports*

FISCAL YEAR	CRUDE MATERIALS FOR USE IN MANUFACTURING	FOODSTUFFS IN CRUDE CONDIT'N & FOOD ANIMALS	FOODSTUFFS PARTLY OR WHOLLY MANUFACTURED	MANUFACTURES FOR FURTHER USE IN MANUFACTURING	MANUFACTURES READY FOR CONSUMPTION	MISCELLANEOUS
	Dollars	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*
1820	31,246,382	2,474,822	10,085,366	4,867,379	2,925,165	84,526
1830	36,482,266	2,724,181	9,556,992	4,117,606	5,461,589	182,244
1840	75,488,421	4,564,532	15,936,108	4,841,101	10,584,079	246,320
1850	83,984,707	7,535,764	20,017,162	6,060,900	17,162,206	139,494
1860	216,009,648	12,166,447	38,624,949	12,641,625	35,811,383	988,371
1870	213,439,991	41,852,630	50,919,666	13,711,708	56,329,137	363,341
1880	238,787,934	266,108,950	193,352,723	29,044,159	92,774,139	3,878,448
1890	304,566,922	132,073,183	224,756,580	46,454,992	132,527,050	4,915,101
1900	325,244,296	225,906,246	319,696,334	153,275,660	331,746,496	14,894,539
1910	565,934,957	109,828,320	259,259,654	267,765,916	499,215,329	8,079,822
1920	1,968,639,653	626,566,067	1,514,526,450	991,536,840	2,834,848,116	13,191,980
1921	1,288,361,358	979,542,840	779,204,666	660,195,147	2,670,347,350	82,232,315
1922	925,632,665	520,498,723	623,606,878	411,646,496	1,210,868,533	7,613,767
1923						
1924						
1925						
1926						
1927						

(b) *Imports*

(Includes both free and dutiable, all classes)

FISCAL YEAR	CRUDE MATERIALS FOR USE IN MANUFACTURING	FOODSTUFFS IN CRUDE CONDIT'N & FOOD ANIMALS	FOODSTUFFS PARTLY OR WHOLLY MANUFACTURED	MANUFACTURES FOR FURTHER USE IN MANUFACTURING	MANUFACTURES READY FOR CONSUMPTION	MISCELLANEOUS
	Dollars	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*
1821	1,983,706	6,081,641	10,820,814	4,079,064	30,998,900	556,709
1830	4,214,825	7,382,274	9,653,971	5,152,486	35,734,837	582,563
1840	11,510,245	15,273,321	15,188,845	11,359,196	44,300,005	630,094
1850	11,711,266	18,011,659	21,465,776	26,163,152	95,312,499	845,174
1860	39,691,797	45,743,826	59,837,674	34,899,303	172,128,991	1,314,528
1870	55,615,202	54,081,091	96,081,635	55,569,071	173,614,888	996,521
1880	131,861,617	100,297,040	118,125,216	110,779,516	196,587,405	10,303,952
1890	170,637,250	128,480,142	133,332,031	116,924,080	230,685,581	9,251,325
1900	276,241,152	97,916,293	133,027,374	134,222,045	203,126,341	5,407,979
1910	566,270,770	144,776,636	181,566,572	285,138,373	367,723,367	11,471,712
1920	2,141,453,939	622,092,148	891,029,825	801,248,503	745,165,833	37,361,866
1921	1,051,115,616	450,394,836	844,510,050	543,046,843	744,030,118	21,361,883
1922	909,097,565	301,962,648	332,893,772	405,967,998	639,820,899	18,266,126
1923						
1924						
1925						
1926						
1927						

Examples

1. Find the proportion of raw materials in the total of exports in selected years since 1820.

2. Find the proportion of raw materials in the total of imports in selected years since 1820.

3. Do the same for the other main groups of materials.

4. Has there been a tendency to import and export less or more of raw products in each decade?

5. Why is it better to import raw materials and export finished articles?

6. In the *Statistical Abstract of the United States*, published each year by the U. S. Department of Commerce, there is given the quantity and value of each kind of imports and exports. In this report find the total exports of selected products — cotton, sugar, wheat, corn, agricultural implements, coal, lumber, electrical machinery, etc.

7. Bring the information in this chapter down to date.

Sources for Research

1. The *Statistical Abstract of the United States* contains a comprehensive view of the subject matter of this chapter.

2. The *World Almanac* and Chicago *Daily News Almanac* give the latest compiled data on many of the subjects here treated.

3. The U. S. Department of Commerce is the source of the most complete data for use in this chapter.

CHAPTER IX

NATURAL RESOURCES

The natural resources which have been given in and upon the earth for the use of the people consist of minerals, soils, forests, and water power. The saving of these resources and their wise use for the common benefit of present and future generations are duties which fall upon the community acting through the government. Some of these resources are limited in supply and when used are not replaceable, such as coal, petroleum, and lead. Some are limited but may be reproduced, as forests. Resources such as water power may fall into the hands of private interests and be withheld from the public except at exorbitant prices. For some resources substitutes may be found which are more abundant in supply. In all cases it is a common duty to use carefully what is given, to prevent waste, and to promote the scientific discovery of new materials and of substitutes for those that are scarce.

Unreplaceable Goods

When coal and petroleum are used, they are destroyed for all future use. These resources cannot be replaced. They were formed in earlier geologic ages and the causes that made them are no longer at work; consequently when the supply that was placed in the ground is used up there will be no more of these products. Lead and zinc when used in making paints are destroyed and the supply cannot

be replaced. Natural gas seemed at one time to be inexhaustible, and the product was shamefully wasted. Today the supply is rapidly diminishing and has been entirely exhausted over large areas where it was at one time the principal fuel in industry. There has been considerable waste in the production of these vital products because of the greed of private interests which have sought to get the largest immediate returns. Coal veins have been allowed to cave in through the efforts to mine only the most productive and profitable veins. From a ton to a ton and a half of anthracite coal has been wasted for every ton produced, and a half ton of bituminous coal has been wasted for every ton taken out of the ground. These losses represent a vast waste of a resource which is limited in supply and essential to the people's welfare. In a lesser way the same statements apply to petroleum, copper, zinc, iron ore, and other mineral products.

Two facts stand out in the discussion of unreplaceable products: first, that the supply is limited, and, second, that the use is greatly increasing. It will be the purpose now to set forth the production of various mineral products during the last few years to show their increased use and the probabilities of their exhaustion.

Petroleum

The next table shows the production of petroleum in selected years since 1880 in each of the oil-producing states. These figures indicate an increase from 26,286,123 barrels in 1880 to 551,197,000 in 1922. The figures show also that this increased production has come largely from the opening of new oil territory. The older oil-producing states show a decline in most instances.

TABLE 89. — CRUDE-PETROLEUM PRODUCTION BY STATES: 1880–1922

[Source: Reports of U. S. Geological Survey, Department of the Interior]

STATE	1880	1890	1900	1910	1915	1918	1920	1921	1922	1923	1924	1925	1926	1927
	1,000 barrels	*1,000 barrels*	*1,000 barrels*	*1,000 barrels*	*1,000 barrels*	*1,000 barrels*	*1,000 barrels*	*1,000 barrels*	*1,000 barrels*	*1,000 barrels*	*1,000 barrels*	*1,000 barrels*	*1,000 barrels*	*1,000 barrels*
Arkansas								10,473	12,097					
California	41	307	4,324	73,011	86,592	97,532	103,377	112,600	139,671					
Colorado		369	317	240	208	143	111	108	97					
Illinois		1		33,143	19,042	13,366	10,774	10,043	9,363					
Indiana		63	4,874	2,160	876	878	945	1,158	1,084					
Kansas		1	75	1,129	2,823	45,451	39,005	36,456	31,588					
Kentucky		6	62	469	437	4,376	8,738	9,013	8,981					
Louisiana				6,841	18,192	16,043	35,714	27,103	34,171					
Montana						69	340	1,509	2,369					
New York			1,301	1,054	888	809	906	988	1,000					
Ohio	39	16,125	22,363	9,916	7,825	7,285	7,400	7,335	6,762					
Oklahoma			6	52,029	97,915	103,347	106,206	114,634	146,631					
Pennsylvania	26,028	28,458	13,258	8,795	7,839	7,408	7,438	7,418	7,443					
Tennessee							14	12	10					
Texas			836	8,899	24,943	38,750	96,868	106,166	116,670					
West Virginia	179	493	16,196	11,753	9,265	7,867	8,249	7,822	7,028					
Wyoming			5	115	4,246	12,596	16,831	19,333	26,232					
Undistributed			2	4	14	8	13	12						
Total	26,286	45,824	63,621	209,557	281,104	355,928	442,929	472,183	551,197					
Total value (1,000 dollars)	24,601	35,365	75,989	127,900	179,463	703,944	1,360,745	814,745	900,200					

Examples

1. At the rate of increase between 1910 and 1920, what will be the production of petroleum in 1930?

2. At the rate of increase between 1915 and 1920, what will be the production in 1930?

3. At the rate of increase between 1910 and 1920, how much oil will be produced by 1930?

4. With these facts and the estimated amount of oil in the ground in mind, how long before the supply of oil will be used up?

5. What will be the probable solution of the fuel problem?

6. Bring the table down to date for years following 1922. (See *Statistical Abstract of the United States* or the report of the U. S. Geological Survey.)

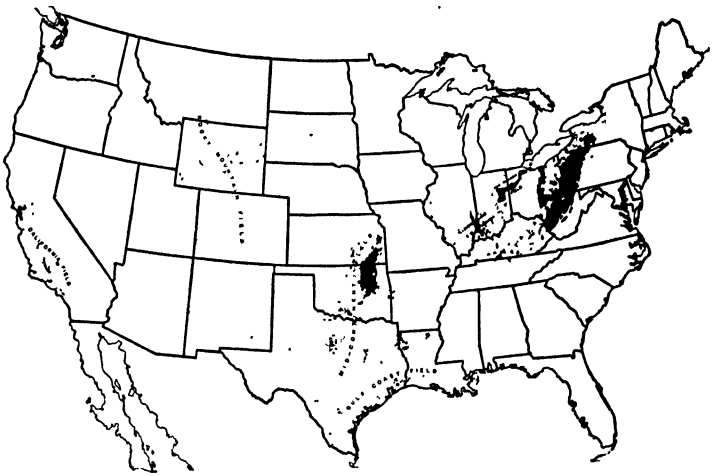


FIGURE 48. — PRINCIPAL PETROLEUM AND NATURAL-GAS FIELDS OF THE UNITED STATES

IRON ORE

Table 90 indicates the increased demand for iron ore and the production of ore by states. These figures show

TABLE 90. — IRON-ORE PRODUCTION (MARKETED) BY STATES: 1914–1922

[Source: Reports of U. S. Geological Survey, Department of the Interior]

STATE	1914	1916	1918	1920	1921	1922	1923	1924	1925	1926	1927
	Long tons	*Long tons*	*Long tons*	*Long tons*	*Long tons*	*Long tons*	*Long tons*	*Long tons*	*Long tons*	*Long tons*	*Long tons*
Alabama	4,514,926	6,801,839	6,121,087	5,833,217	2,835,761	5,294,520					
California	1,282	2,970	3,121	6,592	2,064	3,204					
Georgia	66,222	252,143	262,003	104,482	3,822	28,566					
Michigan	8,533,280	18,995,797	17,587,416	18,862,578	5,011,804	12,457,856					
Minnesota	23,298,547	45,869,251	43,263,240	39,747,594	17,648,603	30,209,372					
Missouri	36,304	34,914	71,968	50,825		58,320					
Montana				10,803	26,174	21,726					
New Jersey	346,820	528,084	375,238	417,100	115,132	90,374					
New Mexico		157,779	275,266	274,705	110,528						
New York	640,252	1,464,917	899,970	959,408	174,368	191,195					
North Carolina			108,332	71,810		19,279					
Pennsylvania	400,062	558,556	515,845	719,813	187,062	782,916					
Tennessee	330,214	467,741	408,954	373,012	25,219	159,473					
Utah			52,722	36,159	60,773	15,018					
Virginia	346,382	486,798	400,135	320,109	54,353	30,359					
Wisconsin	591,595	1,529,459	1,167,640	1,067,159	117,755	794,673					
All other	608,394	720,305	508,265	425,875	279,110	455,769					
Total	39,714,280	77,870,553	72,021,202	69,281,341	26,652,528	50,612,620					

wide fluctuations in production due to the demands of war, but a steady increase from 27,553,000 tons in 1900 to 50,612,620 tons in 1922, or an increase of nearly 100 per cent.

The total known supply of iron ore in the United States has been estimated by the U. S. Geological Survey at four and a half to seven and a half billion tons of high-grade ores. The low-grade ores are probably equal in amount.

Examples

1. At the rate of increase in production between 1914 and 1922, what will be the production of iron in 1930?
2. If the rate of increase continues, how long will the resources of iron last?
3. Give reasons for great increase after 1914 and for the decrease in 1921.
4. Bring the table of iron production down to date.

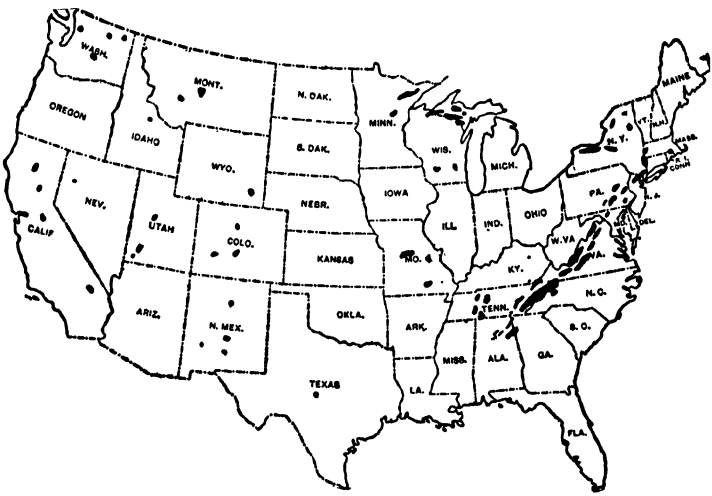


FIGURE 49. — PRINCIPAL IRON-ORE-PRODUCING LOCALITIES

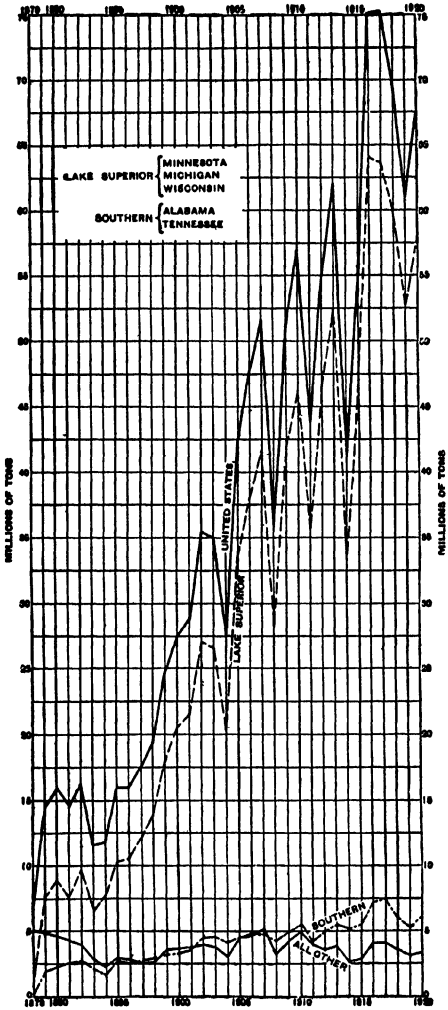


FIGURE 50. — PRODUCTION OF IRON ORE, UNITED STATES AND PRINCIPAL PRODUCING REGIONS: 1879–1920

Coal

The production of coal is increasing rapidly, especially of bituminous coal, as the next table indicates.

The known supply of coal in the United States was estimated at 3530 billion tons in 1916. As the more easily

Table 91. — Anthracite and Bituminous Coal Production by States: 1880, 1890, 1900, 1910, and 1918–1922

[Source. Reports of U. S. Geological Survey, Department of the Interior]

State	1880	1890	1900	1910	1918	1919	1920
Bituminous	*1,000 net tons*	*1,000 net tons*	*1,000 net tons*	*1,000 net tons*	*1,000 net tons*	*1,000 net tons*	*1,000 net tons*
Alabama	324	4,090	8,394	16,111	19,185	15,537	16,294
Alaska						61	61
Arkansas	15	400	1,448	1,906	2,227	1,429	2,104
California	237	111	172	11			
Colorado	463	3,077	5,244	11,974	12,408	10,323	12,278
Georgia	155	228	316	177	67	53	50
Illinois	6,115	15,292	25,768	45,900	89,291	60,863	88,725
Indiana	1,454	3,306	6,484	18,390	30,679	20,912	29,351
Iowa	1,461	4,022	5,203	7,928	8,192	5,625	7,814
Kansas	771	2,260	4,468	4,921	7,562	5,225	5,926
Kentucky	946	2,701	5,329	14,623	31,613	30,036	35,691
Maryland	2,229	3,358	4,025	5,217	4,497	3,022	4,065
Michigan	101	75	849	1,535	1,465	997	1,490
Missouri	844	2,735	3,540	2,982	5,668	3,979	5,370
Montana		517	1,662	2,921	4,533	3,236	4,414
New Mexico		376	1,299	3,508	4,023	3,139	3,683
North Carolina		10	18		1	7	12
North Dakota		30	130	399	720	841	949
Ohio	6,009	11,495	18,988	34,210	45,813	35,877	45,878
Oklahoma	121	869	1,922	2,646	4,813	3,802	4,849
Oregon	43	62	59	68	13	19	21
Pennsylvania	18,425	42,302	79,842	150,522	178,551	150,758	170,608
South Dakota						14	13
Tennessee	495	2,170	3,510	7,121	6,831	5,213	6,662
Texas		184	968	1,892	2,261	1,681	1,615
Utah	15	318	1,147	2,518	5,137	4,631	6,005
Virginia	43	784	2,394	6,508	10,290	9,327	11,379
Washington	145	1,264	2,474	3,912	4,082	2,990	3,757
West Virginia	1,830	7,395	22,647	61,671	89,936	79,037	89,971
Wyoming	590	1,870	4,015	7,533	9,439	7,220	9,630
Miscellaneous		1	1	5	90	7	3
Total bituminous	42,831	111,302	212,316	417,109	579,386	465,860	568,667
Pennsylvania (anthracite)	28,650	46,469	57,368	84,485	98,826	88,092	89,598
Grand total	71,481	157,771	269,684	501,594	678,212	553,953	658,265

TABLE 91. — *Continued*

STATE	1921	1922	1923	1924	1925	1926	1927
BITUMINOUS	*1,000 net tons*	*1,000 net tons*	*1,000 net tons*	*1,000 net tons*	*1,000 net tons*	*1,000 net tons*	*1,000 net tons*
Alabama	12,569	16,000					
Alaska	77						
Arkansas	1,228	950					
California	39						
Colorado	9,123	10,004					
Georgia	34						
Illinois	69,603	59,100					
Indiana	20,320	17,330					
Iowa	4,531	4,600					
Kansas	3,467	3,100					
Kentucky	31,588	40,100					
Maryland	1,828	1,100					
Michigan	1,142	940					
Missouri	3,552	2,700					
Montana	2,734	2,400					
New Mexico	2,453	3,100					
North Carolina	23						
North Dakota	865	1,180					
Ohio	31,943	26,500					
Oklahoma	3,363	2,800					
Oregon							
Pennsylvania	116,014	105,000					
South Dakota	8						
Tennessee	4,460	4,600					
Texas	973	1,000					
Utah	4,079	4,864					
Virginia	7,492	11,100					
Washington	2,429	2,400					
West Virginia	72,787	81,000					
Wyoming	7,201	5,800					
Miscellaneous		126					
Total bituminous	415,922	407,894					
Pennsylvania (anthracite)	90,473	52,485					
Grand total	506,395	460,379					

mined veins are used up, the difficulties and costs of mining must necessarily increase.

Examples

1. Estimate the amount of anthracite coal which will be necessary in 1930; of bituminous coal.
2. At the present rate of increase, how long will the supply last?
3. Bring the table of coal production down to date.

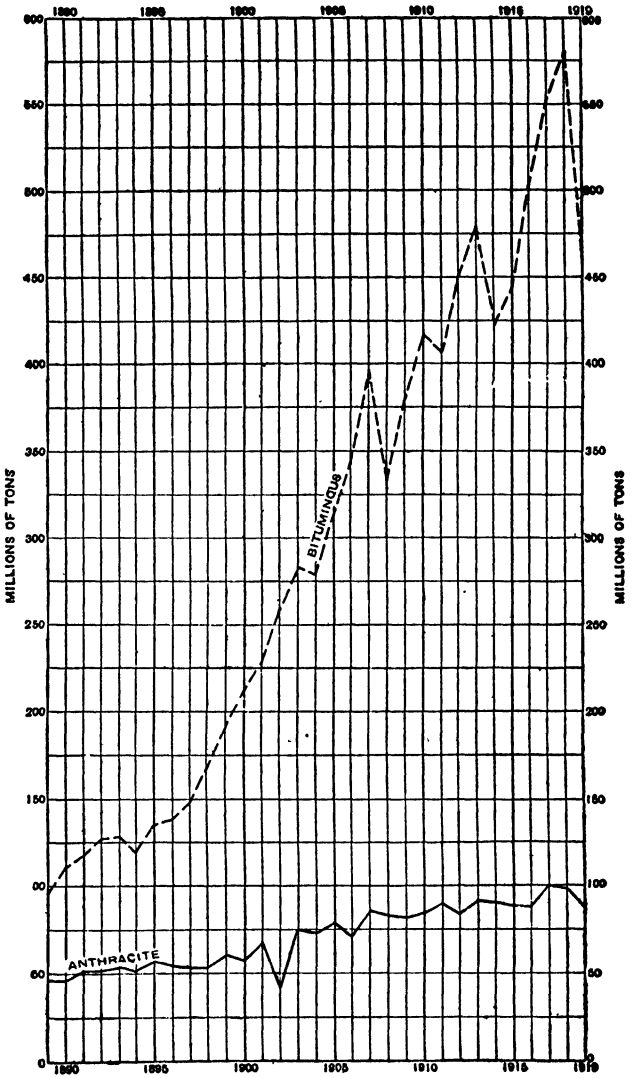


FIGURE 51.— ANNUAL PRODUCTION, ANTHRACITE AND BITUMINOUS COAL: 1889–1919

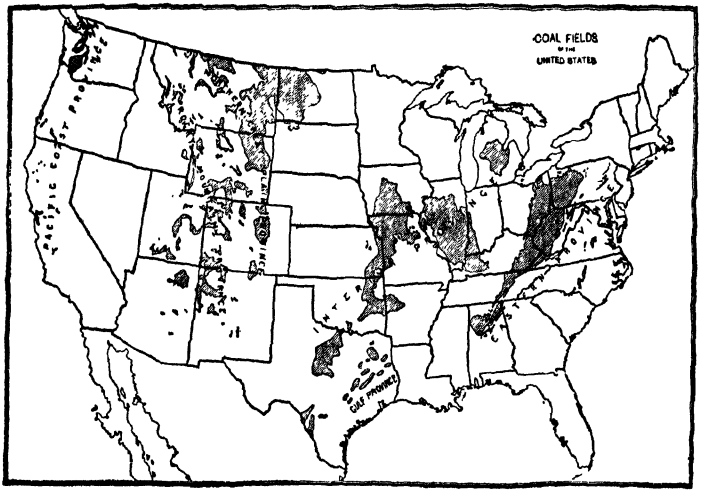


FIGURE 52

OTHER MINERALS

The production of copper has grown from 115,966 tons in 1890 to 539,759 tons in 1920, the production having reached the peak of 860,648 tons in 1916 when the war demands for copper were greatest. The amount of copper ore in the ground in the United States is at least six hundred million tons.

The production of lead increased from 143,630 tons in 1890 to 476,849 tons in 1920; aluminum from 61,281 pounds in 1890 to 41,373,000 pounds in 1920.

Examples

1. Find the probable life of copper ore if the increases between 1890 to 1920 continue.
2. Find the production of copper for the years since 1920.

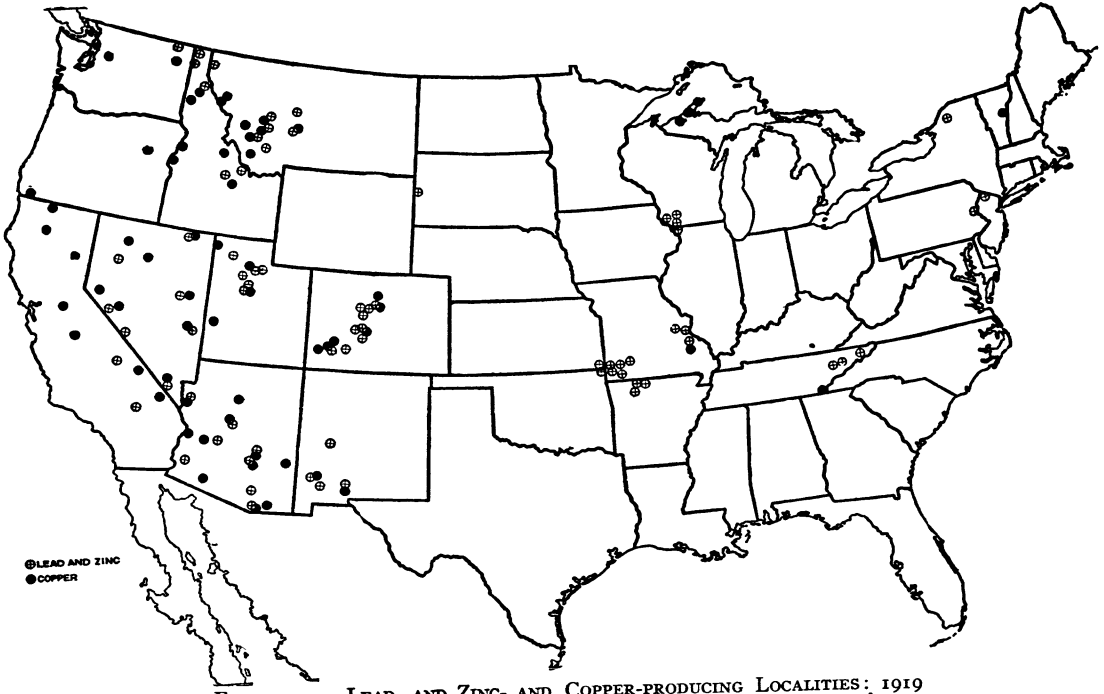


FIGURE 53.—LEAD- AND ZINC- AND COPPER-PRODUCING LOCALITIES: 1919

3. What was the rate of increase per year in the production of lead and aluminum?

4. What will be the amount of these minerals required if the increase continues at the same rate to 1940?

Forest Products

There were in the United States originally 822 million acres of forest lands. By 1920 the forest area had been reduced to 470 million acres, of which only 138 million acres were virgin forest. The original stand of timber has been estimated at 5200 billion feet board measure, while the present stand does not exceed 1600 billion feet. The annual cut and destruction reach about 60 billion feet, board measure, while the annual growth is only about one-fourth that much. At the present rate, therefore, forest resources will be exhausted in a comparatively short time, unless measures for more effective conservation and reproduction are taken. Undoubtedly the present forest areas, which are valuable in the main for no other purpose, could be made to produce as much as the annual drain. The bulk of the lands now partly denuded or only partially productive are in the South and East, where the largest demand for lumber is found.

The future demand for wood products is likely to increase, since they enter so largely into all productive processes. The U. S. Department of Agriculture after a careful survey of forest production declares: "If present living standards and industrial uses are maintained, any reduction in the quantity of wood taken from the forest must be sought either through lessening waste through substitutes or through imports. On the other hand, other things being equal our timber requirements must be expected to increase with increase in population."

The present per capita use of wood products warrants the conclusion that by 1950, if the population of the country has increased to 150 millions, the demands for wood products will reach 32 billion cubic feet. The present growth is about 24 cubic feet per acre per year.

To meet our needs at the present rate of production would require forest areas of 937 million acres — more land than we have capable of growing trees. The Department of Agriculture discloses that in due time under intensive forestry we can grow annually on 470 million acres of forest

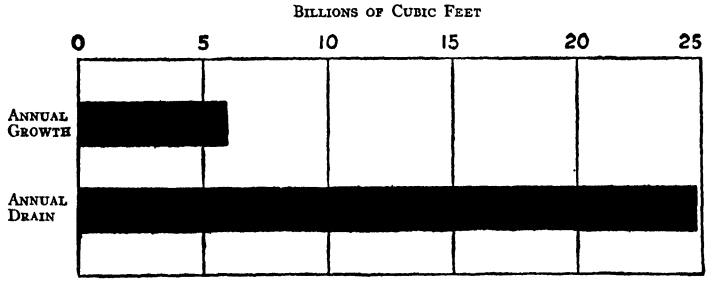
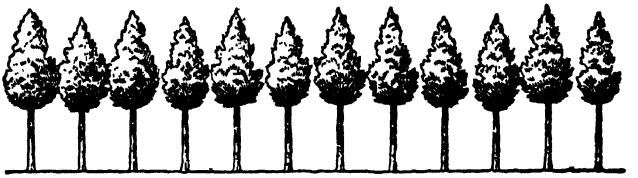


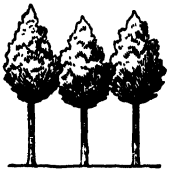
Figure 54. — Forests: Annual Growth and Drain

land at least 58 cubic feet per acre, or about 27 billion cubic feet per year. Even this production, which can be brought about only after years of intensive promotion, would slightly exceed the present requirements and would fall short of the amount which the expected increase in use would require.

We have then a plain matter of mathematical calculation. At present rates of use and destruction the supply will be exhausted in a few years. To meet this situation three main avenues are open: first, the prevention of waste; second, the promotion of forest growth and reforestation; and, third, the discovery and promotion of substitutes.

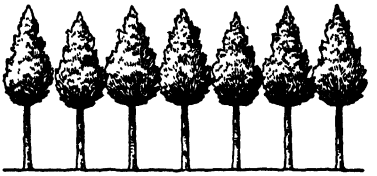


25 BILLION CUBIC FEET
PRESENT ANNUAL DRAIN
ON FORESTS



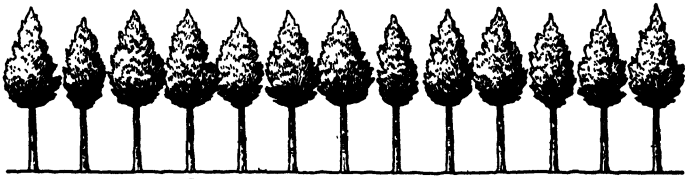
6 BILLION CUBIC FEET

PRESENT
ANNUAL
GROWTH



14 BILLION CUBIC FEET

GROWTH UNDER CRUDE
FORESTRY



27 BILLION CUBIC FEET
GROWTH UNDER INTENSIVE FORESTRY

FIGURE 55

The present waste, estimated at from six and one-half to seven billion cubic feet, is due to careless methods of cutting, wasteful manufacture, forest fires, insect pests, diseases, and destruction of buildings by fire. These wastes exceed the present annual growth. The annual growth, if increased as deemed possible, will still fall short of the needs of the future, and substitutes for wood products must be discovered and promoted. The welfare of the people will depend upon the success with which in the immediate future the three major ends are attained; namely, prevention of waste, promotion of growth, and discovery and utilization of substitutes.

Fire Waste

A glance at Table 92 discloses the enormous size of the fire waste in this country. Despite the efforts made everywhere to prevent fires the ravages go on, reaching the total of 485 million dollars in 1921. This loss is a direct social drain, for the larger portion is covered by insurance and thus the burden is distributed upon the people.

Examples

1. Find the fire loss for the years since 1921.
2. What measures are being taken to prevent fires?
3. How does the loss from fires compare with the total value of property?
4. If the increase in fire rates between 1910 and 1920 continues, what will be the fire loss in 1930?

Power

Mechanical power is the means by which the greatest part of the world's work is done. Only a small portion of

TABLE 92. — FIRE LOSSES IN THE UNITED STATES, ESTIMATED VALUE: 1875–1921

[Source: Annual reports of the National Board of Fire Underwriters credited to the New York *Journal of Commerce* and *Commercial Bulletin*]

YEAR	LOSS	YEAR	LOSS	YEAR	LOSS
	Dollars		*Dollars*		*Dollars*
1875	78,102,285	1893	167,544,370	1911	217,004,575
1876	64,630,600	1894	140,006,484	1912	206,438,900
1877	68,265,800	1895	142,110,233	1913	203,763,550
1878	64,315,900	1896	118,737,420	1914	221,439,350
1879	77,703,700	1897	116,354,575	1915	172,033,200
1880	74,643,400	1898	130,593,905	1916	214,530,995
1881	81,280,900	1899	153,597,830	1917	250,753,640
1882	84,505,024	1900	160,929,805	1918	290,959,885
1883	100,149,228	1901	165,817,810	1919	249,179,275
1884	110,008,611	1902	161,078,040	1920	303,482,351
1885	102,818,796	1903	145,302,155	1921	485,000,000
1886	104,924,750	1904	229,198,050	1922	
1887	120,283,055	1905	165,221,650	1923	
1888	110,885,665	1906	518,611,800	1924	
1889	123,046,833	1907	215,084,709	1925	
1890	108,993,792	1908	217,885,850	1926	
1891	143,764,967	1909	188,705,150	1927	
1892	151,516,098	1910	214,003,300		

the things done today could be done if we had to rely upon man power as the ancients did, or upon man and animal power as did the people of the whole world a century and a half ago. The forces of nature have been harnessed by the ingenuity of man and have been made to do his work in infinite ways.

The principal mechanical powers have been harnessed by means of the steam engine, internal combustion engine, and water wheels, using fuel and waterfall as the source of energy. The amount of such power used in the United States has been increasing rapidly and now amounts to fully 50 million horse power, not including automobiles.

The principal uses of power are in manufacturing. Here the growth of our dependence upon power may be seen. The census of manufactures has shown the growth of power uses in manufacturing for census years as follows.

TABLE 93. — GROWTH OF POWER USED IN MANUFACTURING: 1879–1919

YEAR	HORSE POWER	NUMBER OF MEN EMPLOYED
1879	3,410,837	2,732,595
1889	5,938,635	4,251,535
1899	10,097,803	4,712,763
1909	18,675,376	6,615,046
1919	29,504,792	9,096,376

Examples

1. What is the rate of increase since 1879 in the use of water power?
2. How many men per horse power were employed in each year in the table? Account for the changes.

The bulk of power is supplied by steam; in 1919 there was 17,037,973 horse power from steam engines and turbines,

1,765,263 from water wheels, 1,259,400 from internal combustion engines, 9,347,556 from electric power generated by steam engines and water wheels, and 94,600 not designated.

Mining takes another large and increasing amount of power. In 1902 the horse power employed in mining was 2,867,562; in 1919 it was 6,723,786.

Railroads, electric railways, and electric-light plants take a large amount of power, while other uses, such as on the farm and in the home, are rapidly increasing. The power employed in automobile transport, both for pleasure and for business, is stupendous, and forms a large drain upon one of the principal power sources — petroleum.

The interest which the student of social science has in the subject of water power is related to conservation. Power being essential to the very life of society, it is of prime interest that its sources be conserved. What would the world be like if we were deprived of the uses of power? We depend for power primarily upon coal, petroleum, and waterfalls. Coal and petroleum are exhaustible, and at the present increases in the rate of their use it will not be many years before petroleum is exhausted and not many decades before coal begins to fail as a source of power. What then will the people do? For the vast uses of internal combustion engines science may devise cheap methods of producing alcohol and other forms of fuel. For the purpose of manufacturing, mining, and transportation we shall turn to the power of falling water. Water power, or "white coal" as it is called, is the one permanent inexhaustible source of power. It is not unlimited in extent, but there is sufficient to provide for the needs of a vastly increased population. If it should be systematically devel-

oped now, we would conserve coal and petroleum and thus spread out their usefulness to more generations to follow.

In the United States it is estimated that there are waterfalls sufficient to develop 54 million horse power of energy without storage dams, and with extensive storage facilities for flood waters the range of possibilities is 100 to 200 million horse power. This would be sufficient for all of the power needs in manufacturing, mining, and transportation for many generations to come. But at this time (1926) only about 9,000,000 horse power has been developed from water.

The giant super-power system which engineers have mapped to link up all of the great sources of water power and reach all parts of the country with electric energy will make for the rapid development of the potential water power of the country.

The development of the water power of the United States will tend to make significant shifts in industrial life, since industry follows the sources of power. Coal, natural gas, and waterfalls have been in past times the magnets which have drawn industry and people to great industrial centers. The new development of giant power on the Columbia and the Colorado and Muscle Shoals — our greatest potential power producers — may result in changes of profound significance for the industrial population of the country just as other developments of power in coal and natural gas have formed the industrial fabric which we know today.

Soil Conservation

Soil is the source of food supply. The elements of the soil produce the plants which provide food or nourish animals, the products of which are used for food. The ability

of the soil to supply the elements necessary for plant growth is called its fertility. What are those elements? Three elements are supplied from the air and water — carbon, hydrogen, and oxygen. Four are supplied by the soil and are inexhaustible — calcium, magnesium, iron, and sulphur. Three are supplied from the soil and are limited in supply — nitrogen, phosphorus, and potassium.

Every plant that grows takes some of these elements. Where the supply of elements is limited, plant growth will use them up and then they must be restored or else no further plant growth is possible. The three exhaustible elements — nitrogen, phosphorus, and potassium — are soon mined out of the soil by plant growth and must be restored, if there is to be further production. Restoration may take place through fertilization and rotation of crops. Scientific farming keeps the soil continuously and increasingly productive by putting back the elements that plants take out.

The conservation of soil is an important social problem. We must be fed from the soil. There is no more virgin soil to be secured. We must live from the soil we have. Moreover, population is increasing faster than production. In fact, production per acre has been at a standstill throughout the country for the major crops. If the future generations are to have enough to live upon, we must keep the soil not only as good as it was originally but must improve it by scientific analysis of its deficiencies and by putting into the soil the elements that are lacking.

Examples

1. Learn the means used in your community, or in the farming community adjacent, to conserve the soils.

2. Secure information concerning the work of the experiment stations, agricultural schools, and county agents in conserving soils.

Sources for Research

1. The U. S. Geological Survey gathers and publishes complete data of mineral resources and of production. Annual reports and bulletins are obtainable from them.

2. The U. S. Census Bureau takes a census of production of mines every ten years. The last reports for 1920 are in the complete volumes of the census and are summarized in the *Abstract of the Fourteenth Census*.

3. The U. S. Department of Agriculture, Bureau of Forestry, prepares full data on forests and forest products.

4. The U. S. Department of Agriculture also makes investigations and prepares data on soils and soil conservation.

5. The *Statistical Abstract of the United States*, the *World Almanac*, and the Chicago *Daily News Almanac* give summaries of statistical information about production.

6. The *Commerce Yearbook*, published by the U. S. Department of Commerce, gives full data on international production and trade.

PART III

SOCIAL WELFARE

CHAPTER X

EDUCATION

In a democracy where people are called upon to manage their own community affairs and each citizen has a determining voice, it is important that each shall have sufficient education to enable him to perform his duties intelligently. Especially should he know the rights and obligations of the individual and the family in society. Upon the vote of each citizen may rest important civil rights and may turn important events. Elections of great significance to the nation have been won or lost by the narrow margin of a few votes. Laws have been passed or defeated in referendum elections by a small margin. A few votes changed the other way in many elections would have brought a different result, perhaps for better or perhaps for worse.

The importance of education in the civic life of the country has been so clear that immense efforts are made to provide for universal education. The ideal of education in a democracy has been set before this country from its beginning, but it is only within the last half century that means have been liberally provided to attain it. The ideal was expressed in the Massachusetts Constitution framed during the Revolution:

> Wisdom and knowledge, as well as virtue, diffused generally among the body of the people, being necessary for the preservation of their rights and liberties, and as these depend on spreading the opportunities and advantages of education in the various parts of the country, and among the different orders of the people, it shall be the

duty of legislatures and magistrates, in all future periods of this commonwealth, to cherish the interests of literature and the sciences, and all seminaries of them; especially the University at Cambridge, public schools and grammar schools in the towns; to encourage private societies and public institutions, rewards and immunities, for the promotion of agriculture, arts, sciences, commerce, trades, manufactures.

The people as a whole expended $1,039,385,055 from the public treasury in 1920 to make good that ideal, while many millions more were spent from private and benevolent sources for the same purpose.

We have now a system of free education in every part of every state in the Union. Every state requires that children be in school between the ages of 8 and 14 for the time the school is in session. Public high schools are provided in all states. In almost all states opportunity is given for training in vocations. Most of the states provide state colleges for higher training and also for training in the different professions — law, medicine, dentistry, pharmacy, architecture, and engineering. Private schools, academies, and colleges supplement greatly the public facilities for education.

The system of public elementary and high-school education is supported largely in school districts, townships, counties, and cities by direct taxation with considerable aid from the state. Vocational education is locally supported with aid from the state and also from the Federal Government. State universities are supported out of state appropriations and state agricultural colleges are supported by the states with generous aid from the National Treasury. Agricultural experiment stations are maintained by state governments with large grants from the Federal Government.

In the study of social science we need to measure the

extent of education among the people. How far does the system of schools extend the benefits of education among the citizens? We can determine this question only by quantitative measurements of the number of children in school, the length of term, the average attendance, and the point at which the children leave school. We can compare the states with each other and the present with the past. We cannot readily measure the product of the schools. We cannot tell the degree to which schools make better individuals or citizens, but having faith in education for the improvement of the individual, we may be certain that the quality of citizenship is raised. We can measure the improvement in literacy through the statistics of illiteracy gathered every ten years by the Federal Census, but of course, the mere ability to read and write is not sufficient preparation for civic duties in a democracy.

The Progress of Education

The growth of education is shown by the census figures. The next table covers the period since 1850 and shows the number of children between 5 and 20 and the number attending school. It also shows the number for each class of the population.

Examples

1. What percentage of the population 5 to 20 years of age was in school in each census year?
2. How does the percentage of males in school compare with that of females at each census?
3. Compare the extent to which each class of the population is enrolled in schools at each census.
4. Which class shows the greatest percentage of enrollment and the greatest increase in enrollment?
5. Review the tendencies in each group for different census periods.

TABLE 94. — SCHOOL ATTENDANCE, BY SEX, FOR PRINCIPAL POPULATION CLASSES, FOR THE UNITED STATES: 1850–1920

CLASS OF POPULATION AND CENSUS YEAR	POPULATION 5 TO 20 YEARS OF AGE, INCLUSIVE			TOTAL PERSONS ATTENDING SCHOOL		
	Both Sexes	Male	Female	Both Sexes	Male	Female
All classes:						
1920	33,250,870	16,639,600	16,611,270	21,763,275	10,886,703	10,876,572
1910	29,785,997	14,952,530	14,833,467	18,009,891	9,037,655	8,972,236
1900	26,041,940	13,048,537	12,993,403	13,367,147	6,668,823	6,698,324
1890	22,447,392	11,242,700	11,204,692	11,674,878	5,954,142	5,720,736
1880	18,319,830	9,180,762	9,139,068	9,951,608	5,123,507	4,828,101
1870	14,507,658	7,253,307	7,254,351	6,596,466	3,416,153	3,180,313
1860	11,980,728	6,029,870	5,950,858	5,692,954	2,978,292	2,714,662
1850	9,204,908	4,629,874	4,575,034	4,089,507	2,160,296	1,929,211
White:						
1920	29,333,533	14,727,541	14,605,992	19,644,508	9,870,374	9,774,134
1910	25,992,293	13,092,081	12,900,212	16,279,292	8,220,847	8,058,445
1900	22,441,947	11,271,583	11,170,364	12,231,004	6,137,874	6,093,130
1890	19,250,565	9,655,372	9,595,193	10,667,171	5,464,413	5,202,758
1880	15,618,617	7,838,446	7,780,171	9,095,485	4,690,093	4,405,392
1870	12,528,178	6,274,555	6,253,623	6,414,740	3,326,797	3,087,943
1860	10,099,266	5,086,975	5,012,291	5,660,325	2,961,698	2,698,627
1850	7,681,163	3,868,917	3,812,246	4,063,046	2,146,432	1,916,614
Negro:						
1920	3,796,957	1,848,797	1,948,160	2,049,791	979,246	1,070,545
1910	3,677,860	1,797,688	1,880,172	1,670,650	783,869	886,781
1900	3,499,187	1,721,758	1,777,429	1,096,734	509,984	586,750
1890	3,126,497	1,560,122	1,566,375	999,324	484,969	514,355
1880	2,633,683	1,301,039	1,332,644	856,014	433,375	422,639
1870	1,958,237	963,965	994,272	180,372	88,594	91,778
1860	1,859,370	929,994	929,376	32,629	16,594	16,035
1850	1,524,829	761,229	763,600	26,461	13,864	12,597
Native white — Native parentage:						
1920	20,048,170	10,090,524	9,957,646	13,655,361	6,846,934	6,808,427
1910	17,246,081	8,691,250	8,554,831	11,110,583	5,611,901	5,498,682
1900	14,876,715	7,506,903	7,369,812	8,244,687	4,141,997	4,102,690
1890	12,604,550	6,341,747	6,262,803	7,204,755	3,695,420	3,509,335
Native white — Foreign or mixed parentage:						
1920	8,116,313	4,060,004	4,056,309	5,434,720	2,733,322	2,701,398
1910	7,157,099	3,575,800	3,581,299	4,517,203	2,270,706	2,246,497
1900	6,372,199	3,180,232	3,191,967	3,605,128	1,801,303	1,803,825
1890	5,313,470	2,648,167	2,665,303	2,948,534	1,500,893	1,447,641
Foreign-born white:						
1920	1,169,050	577,013	592,037	554,427	290,118	264,309
1910	1,589,113	825,031	764,082	651,506	338,240	313,266
1900	1,193,033	584,448	608,585	381,189	194,574	186,615
1890	1,332,545	665,458	667,087	513,882	268,100	245,782

TABLE 95. — SCHOOL ATTENDANCE, BY SEX AND AGE PERIODS, FOR PRINCIPAL POPULATION CLASSES: 1920

CLASS OF POPULATION AND SEX	TOTAL NUMBER OF PERSONS ATTENDING SCHOOL: 1920	PERSONS 7 TO 13 YEARS OF AGE		PERSONS 14 AND 15 YEARS OF AGE		PERSONS 16 AND 17 YEARS OF AGE		PERSONS 18 TO 20 YEARS OF AGE		OTHERS ATTENDING SCHOOL	
		Total Number	Attending School — Number	Total Number	Attending School — Number	Total Number	Attending School — Number	Total Number	Attending School — Number	Under 7 Years of Age	21 Years of Age and Over
UNITED STATES											
All classes	**21,763,275**	**15,306,793**	**13,869,010**	**3,907,710**	**3,124,129**	**3,828,131**	**1,644,061**	**5,522,062**	**814,651**	**1,966,635**	**344,789**
Male	**10,886,703**	**7,723,238**	**6,984,902**	**1,958,976**	**1,556,519**	**1,902,867**	**767,533**	**2,688,747**	**397,847**	**978,621**	**201,281**
Female	**10,876,572**	**7,583,555**	**6,884,108**	**1,948,734**	**1,567,610**	**1,925,264**	**876,528**	**2,833,315**	**416,804**	**988,014**	**143,508**
Native white:											
Native parentage	13,655,361	9,315,013	8,584,679	2,363,691	1,982,664	2,283,604	1,111,569	3,209,876	562,322	1,201,706	212,421
Male	6,846,934	4,713,879	4,338,518	1,193,040	994,541	1,143,128	522,656	1,582,596	273,761	599,140	118,318
Female	6,808,427	4,601,134	4,246,161	1,170,651	988,123	1,140,476	588,913	1,627,280	288,561	602,566	94,103
Foreign parentage	3,697,784	2,664,732	2,505,236	598,719	453,603	585,970	179,726	824,353	84,290	428,784	46,145
Male	1,863,285	1,338,859	1,259,560	299,293	229,744	290,421	86,436	403,530	44,462	214,490	28,593
Female	1,834,499	1,325,873	1,245,676	299,426	223,859	295,549	93,290	420,823	39,828	214,294	16,552
Mixed parentage	1,736,936	1,157,222	1,091,481	310,540	254,520	310,114	129,001	436,039	65,866	167,232	28,836
Male	870,037	583,763	550,818	155,158	126,804	155,042	59,624	215,397	32,296	83,521	17,974
Female	866,899	573,459	540,663	155,382	127,716	155,072	69,377	220,642	33,570	83,711	11,862
Foreign-born white	554,427	378,151	318,040	159,939	106,622	204,871	48,180	381,034	26,790	17,955	36,840
Male	290,118	190,829	160,727	79,471	54,278	101,187	24,775	182,620	15,646	9,139	25,553
Female	264,309	187,322	157,313	80,468	52,344	103,684	23,405	198,414	11,144	8,816	11,287
Negro	2,049,791	1,738,822	1,331,043	461,778	317,355	430,799	168,760	648,955	70,124	145,571	16,938
Male	979,246	869,045	655,699	225,122	146,225	206,087	70,365	292,055	28,349	69,672	8,936
Female	1,070,545	869,777	675,344	236,656	171,130	224,712	98,395	356,900	41,775	75,889	8,002

The extent to which the youth in the school ages actually attend school is shown in Table 95. The age groups are given as 7 to 13; 14 and 15; 16 and 17; 18 to 20; under 7; and 21 and over. The extent to which each class of the population goes to school in these ages is a fair index of the progress toward universal education by each class.

Examples

1. Find the percentage of each age group attending school in 1920 for the whole population in that group.
2. Find the percentage of each class of the population in each age group attending school.
3. Which class of the population has the best record, as far as enrollment in school is concerned?
4. At what ages do the children in the different classes of population drop out of school in the largest numbers?
5. Compare the attendance of males with females in each age group for all classes of the population.

We need to carry the test still further to learn not only how many attend school but also how long and how regularly they attend each year. These figures are available for the public school only and are shown next.

TABLE 96. — ENROLLMENT AND ATTENDANCE IN PUBLIC SCHOOLS: 1870–1920

TOTAL NUMBER OF CHILDREN 5 TO 18 YEARS	TOTAL ENROLLMENT[1]	AVERAGE DAILY ATTENDANCE
1870 12,055,443	6,871,522	4,077,347
1880 15,065,767	9,867,505	6,144,143
1890 18,543,201	12,722,581	8,153,635
1900 21,404,322	15,503,110	10,632,772
1910 24,239,948	17,813,852	12,827,307
1920 27,728,788	21,578,316	16,150,035

[1] The total enrollment seems to indicate that nearly all of the children were enrolled in 1920 in public schools. This is accounted for by duplicate enrollments where children are enrolled in two or more schools in one year.

Examples

1. Compare the growth of enrollment with the growth of average attendance by finding the percentage of increase in each from 1870 to 1920.

2. Which has increased at the greatest rate: the enrollment, the attendance, or the number of children from 5 to 18 years of age?

School Population by States

Comparison by states indicates wide differences in the enrollment, the average attendance, and duration.

Examples

1. What percentage of the children between 5 and 18 years of age was enrolled in school in each state?

2. What was the percentage in each geographic area?

3. Multiply the average attendance in each by the number of days the schools were in session and find the total number of days in school for all children.

4. Divide the total cost of schools in each state by the total number of pupil days to determine what each child cost per day.

5. Find the cost of schools per capita of the total population in each state.

6. How does the average attendance compare with the total enrollment in each state? Which state has the highest and which the lowest average attendance?

7. Secure the information for later years and bring the table down to date.

Enrollment by Grades

An important question for the social science student is the amount of education which the youth of the country receive. We need to know how far the children go in school and how many fail to keep up in their studies. The enrollment by grades gives a fair idea of this. The U. S. Bureau of Education has compiled figures which show the enrollment year by year in the different elementary and high-school grades in the public schools since 1911.

TABLE 97. — SCHOOL POPULATION BY STATES, SCHOOL YEAR ENDED JUNE, 1920

[Source: Bureau of Education, Department of the Interior]

STATE	NUMBER OF CHILDREN 5 TO 18 YEARS OF AGE	PUPILS ENROLLED	DAILY AVERAGE ATTENDANCE	AVERAGE DURATION OF SCHOOL, IN DAYS	TOTAL EXPENDITURE
					1,000 *dollars*
Alabama	769,256	569,940	367,554	123	9,119
Arizona	86,941	76,505	46,420	163	6,339
Arkansas	563,659	483,172	326,053	126	7,707
California	679,119	696,238	480,864	174	48,980
Colorado	231,833	220,232	150,090	168	13,200
Connecticut	325,519	261,463	205,213	184	16,319
Delaware	52,535	38,483	27,368	182	1,677
District of Columbia	77,505	65,298	52,739	178	4,298
Florida	272,667	225,160	165,720	133	7,031
Georgia	933,368	690,918	467,081	145	9,076
Idaho	121,560	115,192	84,642	173	8,592
Illinois	1,564,806	1,127,560	956,090	171	69,358
Indiana	712,772	566,288	457,113	156	35,765
Iowa	597,914	514,521	405,567	174	37,334
Kansas	463,037	406,880	309,505	164	26,257
Kentucky	702,391	535,332	342,669	123	8,117
Louisiana	557,553	354,079	256,133	149	11,367
Maine	180,434	137,681	115,885	169	6,404
Maryland	361,297	241,618	175,312	180	8,242
Massachusetts	875,109	623,586	519,905	179	40,909
Michigan	871,856	691,674	521,251	172	47,684
Minnesota	615,733	503,597	394,859	160	35,734
Mississippi	591,102	412,670	259,982	122	5,475
Missouri	859,277	672,483	531,221	163	28,707
Montana	137,344	126,576	91,744	166	12,208
Nebraska	344,436	311,821	232,515	164	20,580
Nevada	15,419	14,114	10,625	167	1,384
New Hampshire	99,775	64,205	53,245	175	3,811
New Jersey	767,979	594,780	476,261	189	40,910
New Mexico	107,990	81,399	59,442	165	4,140
New York	2,361,888	1,719,841	1,361,600	188	106,045
North Carolina	838,845	691,249	473,552	134	12,148
North Dakota	198,799	168,283	128,436	167	12,883
Ohio	1,331,685	1,020,663	808,712	165	67,427
Oklahoma	636,340	589,282	355,998	166	22,906
Oregon	179,601	151,028	136,575	152	9,998
Pennsylvania	2,251,289	1,610,459	1,266,350	177	73,491
Rhode Island	143,011	93,501	73,387	182	4,766
South Carolina	569,916	478,045	331,451	110	6,627
South Dakota	177,188	146,955	98,907	167	11,593
Tennessee	707,933	619,852	457,503	134	10,141
Texas	1,411,202	1,035,648	745,667	156	33,606
Utah	134,601	117,406	97,745	166	8,240
Vermont	84,188	61,785	50,186	162	3,588
Virginia	689,398	505,190	351,171	147	12,975
Washington	309,294	291,053	211,239	176	20,595
West Virginia	433,832	346,256	256,479	139	11,402
Wisconsin	682,524	465,243	368,712	175	27,255
Wyoming	47,068	43,112	33,297	152	3,742
Total	27,728,788	21,578,316	16,150,035	161.9	1,036,151

These figures show a falling off for each successive grade. Some of this is due to children's leaving school and some to their failure to pass to the next higher grade. An interesting comparison is possible from these figures showing the number who drop out or fall behind in their grades. The children who entered the first grade in 1911 should have been enrolled in the second grade the following year, but actually only 2,445,174 out of 3,889,542 were so enrolled. In 1913 these children should have been in the third grade, but there were about 123,000 fewer children in that grade that year than in the second grade the previous year. By the time the eighth grade should have been reached in 1918 the number had fallen to 1,376,592, or only about one third of the original starters in the first grade in 1911. The first year in high school found only 839,468, and the second year, 566,680. The final year, 1922, for this class will find a still greater reduction, so that it may be estimated that not more than 10 per cent of those who entered the first grade in 1911 finally graduated from high school. Allowance should be made in each grade for slight losses through deaths and disabilities.

Examples

1. Find the actual number in each grade not reaching the next grade the following year.

2. At which grade is the greatest falling off?

3. Which increased faster from 1917 to 1920, the elementary-school attendance or the high-school attendance?

4. A large part of those who fail to advance in the earlier grades repeat the grade the following year. At the average cost of education what does it cost to have a grade repeated?

5. Secure similar data from the report of the U. S. Bureau of Education for later years and complete the table.

6. Secure similar data for your own state and city.

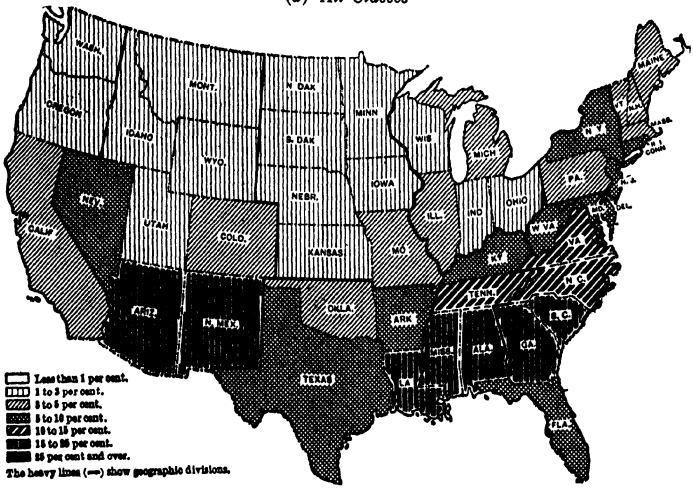
TABLE 98. — DISTRIBUTION OF PUPILS BY GRADES, IN PUBLIC SCHOOLS ONLY, LARGELY ESTIMATED: 1911–1920

PUPILS	1911	1912	1913	1914	1915	1916	1917	1918
Number in each elementary grade								
First	**3,889,542**	3,875,684	3,922,183	3,986,026	4,043,254	4,114,735	4,095,321	4,074,714
Second	2,449,584	**2,445,174**	2,468,270	2,495,599	2,535,900	2,585,365	2,559,576	2,551,285
Third	**2,300,622**	2,295,469	**2,316,117**	2,374,285	2,411,766	2,476,124	2,468,162	2,477,866
Fourth	2,201,315	**2,212,300**	2,248,493	**2,287,632**	2,340,831	2,403,297	2,395,031	2,404,448
Fifth	1,870,290	1,879,624	**1,910,374**	1,975,683	**2,021,627**	2,075,574	2,102,508	2,110,775
Sixth	1,522,714	1,546,947	1,589,160	**1,663,733**	1,720,156	**1,784,266**	1,828,268	1,853,811
Seventh	1,257,894	1,280,805	1,318,665	1,369,113	1,418,686	1,474,750	**1,499,180**	1,505,074
Eighth	1,059,279	1,097,833	1,132,699	1,178,477	1,241,350	**1,292,682**	1,334,636	**1,376,592**
Number in each year of high school								
First	495,194	500,733	546,676	584,295	638,677	692,903	**732,434**	769,661
Second	308,918	325,416	358,673	383,801	416,935	460,225	490,111	**520,198**
Third	208,259	218,545	248,004	266,370	287,326	316,511	338,887	363,558
Fourth	144,624	156,104	180,003	197,629	218,618	241,233	260,542	280,404

TABLE 98. — *Continued*

PUPILS	1919	1920	1921	1922	1923	1924	1925	1926	1927
Number in each elementary grade:									
First	4,097,711	4,112,063							
Second	2,589,008	2,609,723							
Third	2,458,626	2,454,766							
Fourth	2,421,374	2,403,743							
Fifth	2,141,985	2,169,416							
Sixth	1,899,848	1,944,537							
Seventh	1,564,580	1,649,739							
Eighth	1,452,825	1,553,362							
Number in each year of high school:									
First	**839,468**	908,258							
Second	543,185	**566,680**							
Third	378,583	389,347							
Fourth	296,283	**316,931**							

(*a*) *All Classes*



(*b*) *Native White of Native Parents*

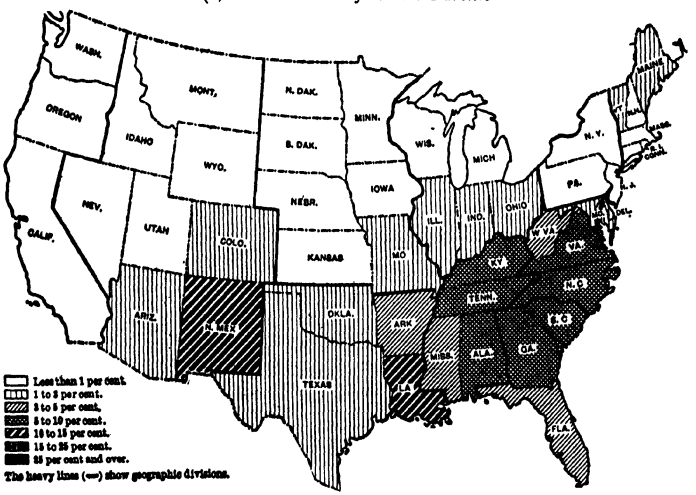


FIGURE 56. — PER CENT ILLITERATE IN POPULATION 10 YEARS OF AGE AND OVER: 1920

Illiteracy in the United States

One of the simple tests of the results of our educational system is the literacy of the people. Since each adult citizen is a voter and decides important questions by his ballot, it is necessary that he be able at least to read, write, and understand. We have free schools in all states and compel children to attend school; hence we might expect that the citizens would be educated. In spite of all our efforts, however, a considerable number of people over 10 and also over 21 years of age cannot read or write in any language. The following facts show the extent of illiteracy and the groups among which illiteracy is found. (The census test of literacy is ability to write in some language, regardless of ability to read.)

Table 99. — Illiteracy by Age, and Urban and Rural

Number of people over 10	82,739,315
Number of illiterates over 10	4,931,905
Number of illiterate males over 10	2,540,209
Number of illiterate females over 10	2,391,696
Number of people 21 and over	60,886,520
Number of illiterates 21 and over	4,333,111
Number of male illiterates 21 and over	2,192,368
Number of female illiterates 21 and over	2,140,743
Urban population over 10	43,978,576
Urban illiterates over 10	1,955,112
Rural population over 10	38,760,730
Rural illiterates over 10	2,976,793

Examples

1. Find the percentage of illiterates in each group and compare.
2. How many people in a thousand in each group are not literate?

Illiteracy is found to be distributed among the native and foreign-born groups as shown in the following statistics from the census bureau.

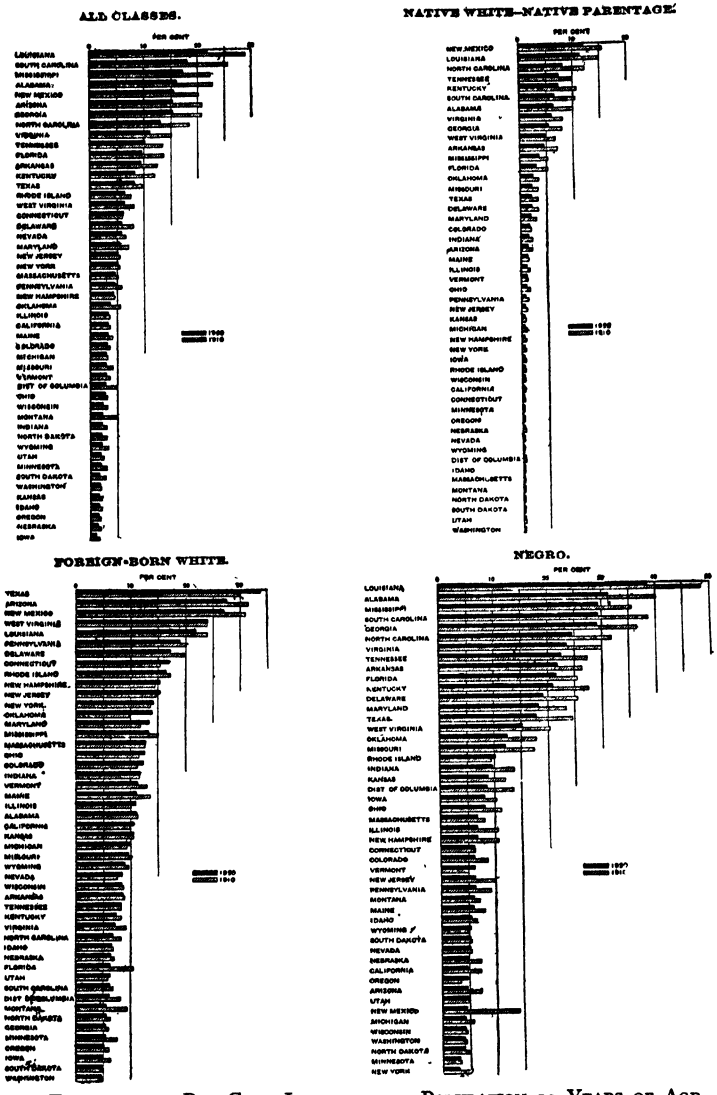


FIGURE 57. — PER CENT ILLITERATE IN POPULATION 10 YEARS OF AGE AND OVER, BY STATES: 1920 AND 1910

TABLE 100. — ILLITERACY BY NATIVE AND FOREIGN-BORN GROUPS
CLASSIFICATION

Native white males	22,361,495
Native white illiterate males	614,612
Native white females	21,716,069
Native white illiterate females	495,263
Foreign-born males	7,419,691
Foreign-born illiterate males	866,822
Foreign-born females	6,078,195
Foreign-born illiterate females	896,918
Males of foreign or mixed parentage	8,289,550
Illiterate males of foreign or mixed parentage	70,095
Females of foreign or mixed parentage	8,494,746
Illiterates of foreign or mixed parentage	62,602
Negro males	4,009,462
Illiterate negro males	942,368
Negro females	4,043,763
Illiterate negro females	899,793

Examples

1. What percentage of each group in this table is illiterate?
2. Arrange the group by the degree of illiteracy.
3. Explain the causes of illiteracy in each group.

The distribution of illiteracy by states is shown in Table 10.

Examples

1. What is the percentage of illiteracy in each state? In each geographic division?
2. What is the percentage of illiteracy among whites in each state? Among colored people?
3. Arrange the various classes of our population in the order of the percentage of illiteracy and give opposite the percentage of illiterates in each class in each state.
4. Compare the literacy of males and females in each of the states..
5. Find the number of illiterates in your own city.

TABLE 101. — ILLITERATE PERSONS 10 YEARS OF AGE AND OVER, BY SEX, COLOR OR RACE, NATIVITY, AND PARENTAGE, AND ILLITERATE MALES OF VOTING AGE, BY STATES, 1920

[Source: Reports of the Bureau of the Census, Department of Commerce]

STATE	MALE	FEMALE	TOTAL	NATIVE WHITE		FOREIGN-BORN WHITE	NEGRO	ILLITERATE MALES OF VOTING AGE
				Native Parentage	Foreign or Mixed Parentage			
Alabama	140,991	137,091	278,082	64,925	469	1,893	210,690	111,997
Arizona	19,984	19,147	39,131	1,454	1,779	19,291	338	15,847
Arkansas	63,959	57,878	121,837	40,753	658	1,145	79,245	50,376
California	53,780	41,812	95,592	5,359	3,388	69,768	1,579	50,609
Colorado	11,587	12,621	24,208	7,655	969	14,224	619	10,558
Connecticut	31,866	35,399	67,265	1,532	1,395	63,131	1,078	31,190
Delaware	5,697	4,811	10,508	2,295	132	3,373	4,700	5,447
District of Columbia	4,345	6,164	10,509	564	76	1,728	8,053	4,185
Florida	37,252	34,559	71,811	12,661	508	2,657	55,639	29,677
Georgia	173,254	155,584	328,838	66,537	259	861	261,115	131,003
Idaho	3,085	1,839	4,924	654	260	2,501	44	2,854
Illinois	86,698	87,289	173,987	24,437	6,470	131,996	10,476	84,059
Indiana	28,864	23,170	52,034	24,981	2,948	17,555	6,476	27,714
Iowa	11,353	9,327	20,680	5,921	2,354	11,004	1,283	10,608
Kansas	12,048	10,773	22,821	5,835	1,344	11,291	4,228	11,078
Kentucky	86,495	68,519	155,014	110,902	1,304	2,244	40,548	74,405
Louisiana	148,081	151,011	299,092	78,818	3,139	9,707	206,730	110,821
Maine	12,421	7,819	20,240	5,106	3,290	11,604	64	11,310
Maryland	33,435	30,999	64,434	13,884	1,484	13,575	35,404	30,091
Massachusetts	68,423	78,184	146,607	2,926	4,854	135,720	2,565	66,729
Michigan	48,173	39,873	88,046	7,580	6,592	70,535	2,203	46,811
Minnesota	17,413	17,074	34,487	1,988	3,967	26,242	241	16,473
Mississippi	120,733	109,001	229,734	21,881	361	1,057	205,813	92,181
Missouri	45,444	37,959	83,403	43,031	4,035	17,669	18,528	41,625
Montana	5,357	4,187	9,544	669	398	5,178	87	5,076
Nebraska	6,999	6,785	13,784	2,184	1,176	9,468	556	6,507
Nevada	2,289	1,513	3,802	119	38	1,241	16	2,141
New Hampshire	8,246	7,542	15,788	1,023	950	13,746	33	7,973
New Jersey	61,546	66,115	127,661	6,797	2,899	111,595	5,910	60,076
New Mexico	18,235	23,402	41,637	23,757	1,762	7,250	228	15,050
New York	188,353	236,669	425,022	16,150	12,256	389,603	5,032	184,213
North Carolina	125,302	116,301	241,603	104,673	171	474	133,674	102,402
North Dakota	4,681	5,256	9,937	335	972	7,238	16	4,365
Ohio	72,627	58,379	131,006	28,535	5,191	84,387	12,715	70,102
Oklahoma	32,347	24,517	56,864	29,413	1,005	5,456	14,205	26,718
Oregon	5,589	3,728	9,317	1,529	461	5,172	89	5,357
Pennsylvania	163,559	149,140	312,699	29,977	8,893	258,812	14,645	159,111
Rhode Island	14,168	17,144	31,312	694	1,561	28,169	839	13,723
South Carolina	110,425	110,242	220,667	38,639	103	391	181,422	86,614
South Dakota	3,806	4,303	8,109	660	830	3,848	35	3,540
Tennessee	98,852	83,777	182,629	101,317	492	1,263	79,532	80,491
Texas	156,408	139,436	295,844	50,424	30,219	112,417	102,053	122,838
Utah	3,678	2,586	6,264	535	390	3,504	59	3,342
Vermont	5,156	3,332	8,488	1,904	1,709	4,837	28	4,957
Virginia	107,374	87,785	195,159	70,081	394	2,150	122,322	86,819
Washington	10,479	8,047	18,526	1,628	751	11,630	245	10,039
West Virginia	40,896	28,517	69,413	43,573	751	14,548	10,513	35,927
Wisconsin	26,276	24,121	50,397	3,260	7,189	38,359	182	25,290
Wyoming	2,180	969	3,149	320	101	2,233	66	2,049
Total	2,540,209	2,391,696	4,931,905	1,109,875	132,697	1,763,740	1,842,161	2,192,368

Ability to Use English

The problem of assimilating the immigrants in our citizenship has been uppermost in the minds of educators, especially since the World War. The first step in such assimilation must clearly be to acquire the use of the English language. A man may be a good citizen without being able to use English, but not many are likely to be able to educate themselves for citizenship without such ability.

The census shows remarkable progress in assimilating immigrants measured by the test of ability to speak English.

Table 102. — Ability to Speak English

	Number of foreign-born over 10 years of age	Unable to speak English
1890	8,786,887	1,371,044
1900	10,014,256	1,217,280
1910	12,944,529	2,953,011
1920	13,497,886	1,488,984

These figures show that the highwater mark of inability to speak English was reached in 1910. Without doubt the percentage has continued to decrease since, in response to the persistent efforts of the schools through evening classes for the foreign-born.

Examples

1. What percentage of the foreign-born over 10 years of age was unable to speak English at each census period?

2. Account for the marked differences.

3. In the *Abstract of the Fourteenth Census* find the number unable to speak English in your own city and in your state and in neighboring states. Which state shows the smallest and which the largest percentage of people unable to speak English?

Higher Education

The growth of higher education is one of the proofs of the success of the elementary and high schools. An increasing number of those who graduate from the elementary schools go on to high school and an increasing number of high school graduates go to normal schools, colleges, and universities.

Table 103. — Enrollment in College and Professional Schools: 1880–1920

YEAR	TOTAL
1880	38,227
1890	55,687
1900	98,923
1910	163,019
1920	441,358

By referring to the table showing the number of people enrolled in schools at the corresponding census we see the enormous increase of higher education.

The fruits of our educational system is shown in the number of advanced students in normal schools, colleges, and universities.

Table 104. — Enrollment of Advanced Students, by Schools: 1920

SCHOOLS	STUDENTS
Normal schools and colleges	163,030
Theology	7,216
Law	20,992
Medicine	14,242
Dentistry	8,809
Pharmacy	5,026
Veterinary medicine	908
Engineering	51,908
Collegiate	441,358

Disregarding duplicates, we may estimate that considerably more than a half million graduates of high schools were pursuing higher training in normal schools, colleges, and professional schools in 1920.

Examples

1. How many persons per thousand were pursuing higher education in 1880, 1890, 1900, 1910, and 1920?
2. Find the extent to which the students of your high school have gone on to higher schools during the previous five years.

Vocational Education

Vocational education includes all forms of education which directly prepare for a vocation in life. The higher form of vocational education is called professional education and includes preparation for the vocation of teaching, law, medicine, ministry, engineering, dentistry, pharmacy, architecture, and similar professional employments. Other forms of vocational education include preparation for the skilled trades, business pursuits, agriculture, and home-making. Still other forms prepare for the simpler tasks of life down to the humblest work of men.

We have had vocational training of the professional sort for many years. Preparation for law and the ministry has been provided from the beginning of our history in this country and centuries before that in Europe. Schools for theological training were early established in the colonies. Other forms of professional training except by apprenticeship developed slowly. Training for the engineering professions, for architecture, pharmacy, and dentistry is quite recent in origin.

Vocational education in agriculture, the skilled trades, business pursuits, and home-making is even more modern

in its beginning. The first great impetus to this form of instruction was given by the United States Congress in 1862 when grants of land were made to the states to aid in establishing schools of agriculture and mechanic arts. These grants, increased by money grants later, stimulated the establishment of such schools in every state. In 1920–1921 there were 68 state schools of agriculture and mechanic arts, with 17,742 instructors and 189,168 students, of whom 39,444 were in engineering and 35,369 in agriculture. Many privately endowed colleges, in addition to the institutions supported by the state, supplied engineering education.

Training for the skilled and semi-skilled trades did not proceed so fast as vocational training for the professions. In 1914 when the subject of vocational education was investigated by a federal commission it was estimated that not more than 1 per cent of the people were trained for the work they were doing. The result of the study was the passage of the Smith-Hughes Vocational Act by Congress, which provides for federal aid to the states for vocational education in agriculture, trades, industrial pursuits, and home economics. Marked progress has been made under the joint arrangements between the states and the nation under this Act.

In 1922 there were 475,828 youths preparing for life's work in trades, agriculture, industrial pursuits, and home-making — a vast army which should add continuously to our vocational efficiency. The progress in this respect has been truly tremendous through the coöperation of the local, state, and Federal governments under the Smith-Hughes Vocational Act.

Private schools and industries at the same time supplied vocational training for large numbers. The private com-

mercial and business schools alone enrolled more than 336,000 students in these courses in 1919-1920.

Examples

1. Secure the latest data from the Federal Board for Vocational Education.

2. Find the latest figures of enrollment in the various kinds of vocational schools in the report of the Bureau of Education or in the *Statistical Abstract of the United States.* Find the increases in each kind of schools.

3. What work is carried on in your community under the Smith-Hughes Vocational Act?

4. What private facilities are maintained for business, industrial, and other vocational training in your community?

Social Value of Vocational Training

The student of social science will view the facts of vocational training as they affect the social and civic life of the community. Men and women are trained at public expense or at the expense of benevolent people in order to promote social and civic welfare. It is recognized that skilled, efficient workers, as well as trained professional workers, serve the community as well as themselves. Whenever and wherever there is a need for trained men which cannot or will not be met by private initiative, the community should act. But the person trained by the community or by benevolent people for a vocation owes a double duty to the community, namely: that of every citizen plus a return in civic service for the direct benefits he has received. Civic and social obligation should, therefore, be impressed at all times upon those whom we train lest they devote the talents they have had developed at social expense

to their own selfish purposes, if not to purposes at variance with the common welfare.

The Growth of Public Education

Public education measured by the amount of money expended upon it from the public treasury has made great progress in the last half century.

Table 105. — Expenditure from the Public Treasury on Education: 1870–1920

	TOTAL EXPENDITURE	SALARIES OF TEACHERS
1870	$63,396,666	$37,832,566
1880	78,094,687	55,942,972
1885	110,328,375	72,878,993
1890	140,506,375	91,836,484
1895	175,809,279	113,872,388
1900	214,964,618	137,687,746
1905	291,616,669	177,462,981
1910	426,250,431	253,915,170
1915	605,460,785	345,006,445
1920	1,036,151,209	613,404,578
1925		

The value of public school property increased from $130,383,008 in 1870 to $2,409,719,120 in 1920.

It will be observed that as late as 1870 the expenditures for schools and the value of property used for school purposes were small. The former were only $1.64 per capita of population and the latter only about twice that much.

Expenditures per Capita

The growth of education may be measured by the expenditure per capita. Such expenditures increased from $1.64 in 1875 to $9.80 in 1920.

TABLE 106. — EXPENDITURES PER CAPITA ON EDUCATION: 1870–1920

	EXPENDITURES PER CAPITA OF POPULATION	AVERAGE PER PUPIL ATTENDING
1870	$1.64	$15.55
1880	1.56	12.71
1890	2.24	17.23
1900	2.84	20.21
1910	4.64	33.23
1920	9.80	64.16

The average expenditure for each pupil each day was 11.8 cents in 1870, 14 cents in 1900, and 39.6 cents in 1920.

Another good comparison of the burden of education is made by showing the wealth of the nation alongside the expenditures. Our total wealth in 1870 was $30,068,518,000. In 1920 it was $290,000,000,000. Every thousand dollars of wealth bore $2.10 of educational cost in 1870 and $3.57 in 1920. Comparing the extent of education in 1870 with the present day, it cannot be said that the increase, if rightly distributed, is over burdensome.

Examples

1. What was the actual increase in expenditures in each ten years from 1870 to 1920?

2. What was the percentage of increase? In which decade was the greatest relative increase? In which decade was the smallest increase?

3. What percentage of the total expenditure was for teachers' salaries?

4. What was the percentage of increase of school property value from 1870 to 1920?

5. What was the percentage of increase in the per capita cost of education from 1870 to 1920?

6. What was the percentage of increase of cost per pupil attending?

7. The increase in average wealth per capita between 1870 and

1920 was from $624 in 1870 to $2750 in 1920. How does this compare with the increased cost of education?

8. The expenditures shown in the tables above are for public education. If we take the same average cost per pupil, what was the annual cost of educating the 2,500,000 children who were in private and parochial schools? What then was the total amount expended for elementary and high-school education?

9. The above expenditures do not include the cost paid by parents for books, school supplies, and the personal expenses of pupils at school. Estimate such expenses on the average and find the total cost for all the children in school.

10. What was the amount of investment per student in school buildings and equipment in 1920? At the same average what would it cost to provide for all children not attending public schools?

Teachers in Public Schools

The number of men and women teachers employed and their salaries are given in the next table.

Table 107. — Teachers and Salaries: 1870–1920

	MEN	WOMEN	TOTAL	SALARIES
1870	77,529	122,986	200,515	$37,832,566
1880	122,795	163,798	286,593	55,942,972
1890	125,525	238,397	363,922	91,836,484
1900	126,588	296,474	423,062	137,687,746
1920	110,481	412,729	523,210	253,915,170
1920	95,654	583,648	679,533	613,404,578

This table shows the marked decline in the number of men teachers since 1900 and the marked increase of women teachers during the same time.

Examples

1. Find the average salaries of teachers at each period.

2. Find the percentage of increase or decrease of women and men teachers for each decade.

3. How does the percentage of increase of teachers compare with the increase in total salaries?

4. Find the number of pupils per teacher in the public schools in each decade from 1870 to 1920.

Sources for Research

1. The *Abstract of the Fourteenth Census* gives detailed information of education for each state and city.

2. The *Statistical Abstract of the United States* each year publishes new data as it is compiled.

3. The United States Bureau of Education publishes a report every two years which gives full data about public education.

4. The states have annual or biennial reports by the State Superintendent of Public Instruction or Commissioner of Education which give detailed educational data for the state.

5. The cities have reports by the School Board or Superintendent of Schools which give detailed information about the city.

6. The Federal Board for Vocational Education publishes annually full data about vocational education in agriculture, industry, commercial subjects, and home economics.

CHAPTER XI

HEALTH AND WELL-BEING

"The most valuable resource of any country," said Professor Thomas Nixon Carver of Harvard, "is its fund of human energy; that is, the working power, both mental and physical, of its people. It is safe to say that any capable race of men who will conserve, economize, and utilize that fund will be able not only to extract a living but actually to prosper in the midst of poor natural surroundings. On the other hand, if they fail to economize their fund of energy; if they waste and dissipate it, they will certainly decay in the midst of the richest geographical and material resources."

This statement is a more lengthy specification of the truth expressed by Gladstone, and so often quoted, that "the health of the people is the wealth of the nation." It expresses what has become a conviction on the part of many of our citizens and has been put into practice here and there with brilliant success, saving thousands of lives and setting the vision of future achievements in conserving human resources.

Health and Disease

During the last quarter of a century it has come to be recognized in this country that health may be improved and lives may be saved by community action to prevent disease and to educate for more healthful living. It has been demonstrated by the results that health may be purchased if we are willing to pay for it and if we plan intelli-

gently to promote it. The people have learned to use their government for health promotion and through city, state, and nation they spend large sums annually for this most humane and useful purpose. The sum of approximately $56,000,000 was spent in 1921 for better health by the cities, states, and nation — amounting roughly as follows:

Cities over 30,000 population	$20,475,626
States	17,400,000
Nation	18,000,000

To the unthinking this seems like a large sum of money, but actually the cities spent only 71 cents per capita for health, the states about 16 cents, and the Federal Government approximately the same. These expenditures do not include the cost of hospitals for the care of the sick nor the sanitary works, such as sewage and garbage disposal, which safeguard health.

Examples

1. If your city spends 71 cents per capita for health, what would be the total expenditure?

2. What is the actual expenditure per capita for health by your city?

3. What were the expenditures of your state for the last fiscal year for health and what was the rate per capita?

Birth and Death Registration

What improvements have been brought about by these expenditures? Fortunately we can measure them almost exactly. The results are tabulated every year by the cities, states, and the nation, showing how many deaths have taken place. The figures thus tabulated are called vital statistics. Such statistics form the most perfect index of social progress, and from these and the statistics of births, which are

gathered by the same agencies, we get a fair picture of social developments.

Statistics of deaths have been gathered for many years in several cities and states. The U. S. Census Bureau has brought together in an annual volume these figures from the states and cities which have done reasonably accurate work. The area from which such figures have been gathered is called the death registration area, and in 1920 the population included in it was 87,486,713, or 82.2 per cent of the total population of the United States.

The Census Bureau has also more recently begun the compilation of statistics of births from states which have approved systems of collecting birth statistics, and the territory covered is called the birth registration area. In 1920 the population included in this area was 63,659,441, or 60.2 per cent of the total.

Since neither the birth nor death registration area includes the whole country, it is necessary to estimate the births and deaths in the territory not covered. This is readily done if we assume, as we have the right, that the same average birth and death rates prevailed in the states not included in the registration area as in the other states. The deaths among 87,486,713 people in the registration area in 1920 were 1,142,558, or 13.1 per thousand population. The deaths among the total population given by the census in 1920 would, therefore, be 1,394,078. Likewise the births in the whole country may be estimated from the partial figures. The births in the birth registration area in 1920 which numbered 63,659,441 people were 1,508,874, or 23.7 per thousand population. The births in the whole country on the basis of the census returns for 1920 would be 2,505,342.

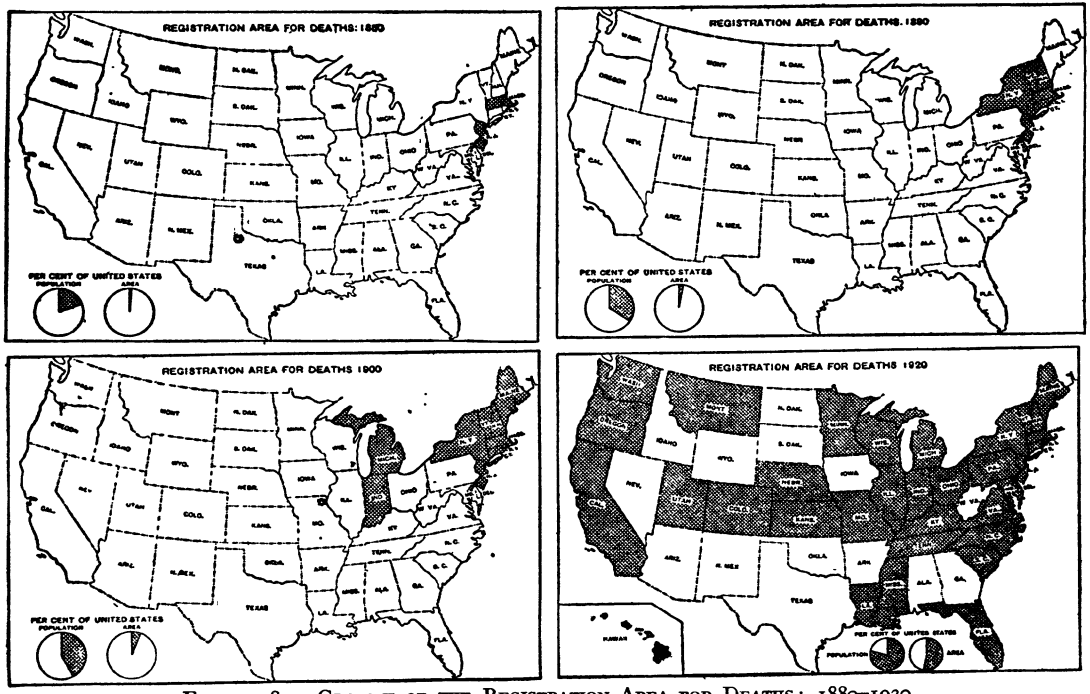


FIGURE 58. — GROWTH OF THE REGISTRATION AREA FOR DEATHS: 1880–1920

Estimating Population by Birth and Death Rates

If there were no other factors entering into the matter, the population could be quite accurately estimated at any time by the statistics of births and deaths. The excess of births over deaths added to the population at the beginning of the period would equal the total population at a given date. Immigration and emigration disturb this calculation.

Birth and Death Rates by States

For the states in the birth registration area the figures of births, deaths, and excess of births over deaths are given in Table 108.

Examples

1. Estimate the population of the United States in 1921, 1922, and later years and find the number of deaths at the death rates prevailing in those years.
2. Find the total number of births in the United States at the prevailing birth rate in 1921, 1922, and succeeding years.
3. If there were no immigration, what would the population be in 1930 at the prevailing birth and death rate in 1920?
4. Which state showed the largest death rate? The largest birth rate?
5. Which state had the largest excess of births over deaths in proportion to population?
6. If the highest death rate prevailing in any state prevailed throughout the country, what would have been the total number of deaths in the United States? If the lowest state death rate prevailed, what would be the total deaths in the United States?

Death Rates

The study of death rates as a whole in this country gives ground for encouragement, because we see in them steady

TABLE 108. — NUMBER OF BIRTHS AND DEATHS, WITH RATES PER 1000 POPULATION, EXCESS OF BIRTHS OVER DEATHS, IN THE REGISTRATION AREA FOR BIRTHS: 1920

[Source: Report of the Bureau of the Census, Department of Commerce]

AREA	BIRTHS	DEATHS	RATE PER 1000 OF POPULATION		EXCESS OF BIRTHS OVER DEATHS
			Births	Deaths	
California	67,199	47,196	19.3	13.6	20,003
Connecticut	34,096	18,916	24.5	13.6	15,180
District of Columbia	8,823	6,463	19.9	14.6	2,360
Indiana	64,809	39,430	22.0	13.4	25,379
Kansas	39,632	20,267	22.3	11.4	19,365
Kentucky	62,888	28,564	26.0	11.8	34,324
Maine	17,328	11,872	22.5	15.4	5,456
Maryland	36,212	21,362	24.8	14.7	14,850
Massachusetts	91,692	53,498	23.6	13.8	38,194
Michigan	92,740	51,549	25.0	13.9	41,191
Minnesota	55,909	25,722	23.3	10.7	30,187
Nebraska	30,911	12,976	23.7	10.0	17,935
New Hampshire	9,946	6,764	22.4	15.2	3,182
New York	235,243	144,558	22.5	13.8	90,685
North Carolina	81,407	32,654	31.6	12.7	48,753
Ohio	123,729	74,341	21.3	12.8	49,388
Oregon	14,942	9,246	18.9	11.7	5,696
Pennsylvania	220,462	120,902	25.1	13.8	99,560
South Carolina	47,777	23,767	28.2	14.0	24,010
Utah	14,157	5,198	31.2	11.5	8,959
Vermont	7,409	5,536	21.0	15.7	1,873
Virginia	65,794	30,514	28.3	13.1	35,280
Washington	27,072	15,164	19.8	11.1	11,908
Wisconsin	58,697	29,675	22.2	11.2	29,022
Total	1,508,874	836,134	23.7	13.1	672,740

progress in the promotion of health and the prevention of disease. We find that the death rates have steadily decreased with the exception of the year 1918, when the influenza epidemic swept away several hundred thousand

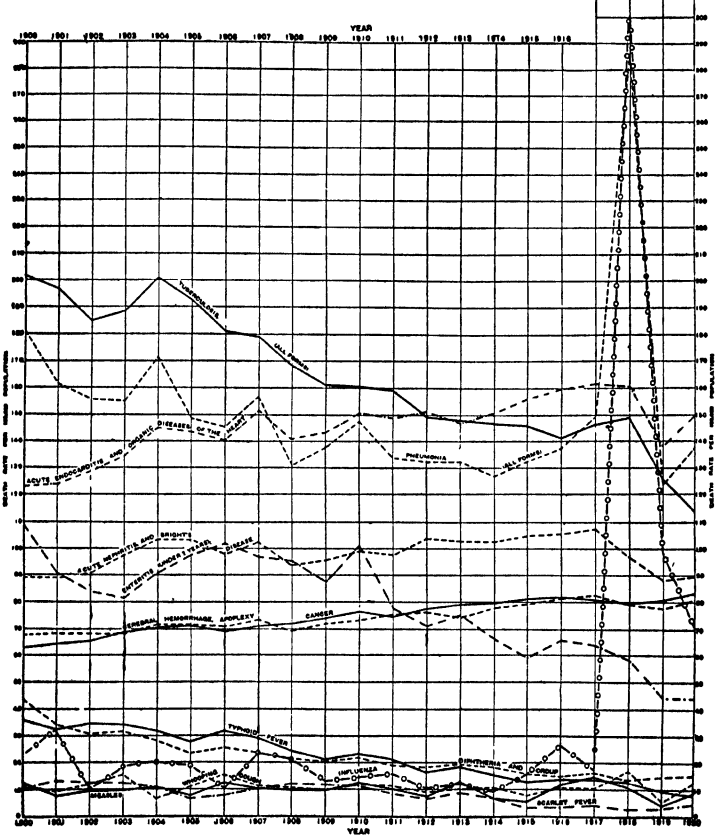


FIGURE 59. — DEATH RATE FROM CERTAIN IMPORTANT CAUSES IN THE REGISTRATION AREA OF THE UNITED STATES: 1900–1920

people. Such facts encourage further community efforts to promote health and save life. Public appropriations of money for health work are readily obtainable when the concrete evidence of lives saved is presented.

TABLE 109. — NUMBER OF DEATHS IN REGISTRATION AREA

[Source: Reports of the Bureau of the Census, Department of Commerce]

CALENDAR YEAR	CONTINENTAL UNITED STATES, POPULATION	REGISTRATION AREA		
		Population		Deaths
		Number	*Per Cent of Total*	
1880	50,155,783	8,538,366	17.0	169,453
1890	62,947,714	19,659,440	31.2	386,212
1900	75,994,575	28,807,269	37.9	512,669
1900		30,765,618	40.5	539,939
1901	77,747,402	31,370,952	40.3	518,207
1902	79,365,396	32,029,815	40.4	508,640
1903	80,983,390	32,701,083	40.4	524,415
1904	82,601,384	33,345,163	40.4	551,354
1905	84,219,378	34,052,201	40.4	545,533
1906	85,837,372	41,983,419	48.9	658,105
1907	87,455,366	43,016,990	49.2	687,034
1908	89,073,360	46,789,913	52.5	691,574
1909	90,691,354	50,870,518	56.1	732,538
1910	92,267,080	53,831,742	58.3	805,412
1911	93,682,189	59,183,071	63.2	839,284
1912	95,097,298	60,359,974	63.5	838,251
1913	96,512,407	63,200,625	65.5	890,848
1914	97,927,516	65,813,315	67.2	898,059
1915	99,342,625	67,095,681	67.5	909,155
1916	100,757,735	71,349,162	70.8	1,001,921
1917	102,172,845	74,984,498	73.4	1,068,932
1918	103,587,955	81,333,675	78.5	1,471,367
1919	105,003,065	85,166,043	81.1	1,096,436
1920	106,418,175	87,486,713	82.2	1,142,558
1921	107,833,284	88,667,602	82.2	1,032,009
1922				
1923				
1924				
1925				
1926				
1927				

Examples

1. What was the death rate per thousand in each year given in the table?

2. What would be the total deaths of the United States at the rate as shown in the registration area in 1880, 1890, 1900, and 1910?

3. If the death rate of 1880 prevailed in 1920, what would be the number of deaths throughout the United States?

4. What was the total number of deaths in 1918, the year of the devastating influenza epidemic? If the average of the year before and the year after be taken as the normal rate in 1918, what was the total number of deaths probably due to the epidemic?

5. Show the number of people who did not die each year, but who would have died if the death rate of 1880 prevailed.

6. What do these figures indicate about the control of disease?

7. Bring the table up to date.

Health Progress

Table 110 is a chart of progress presented by states, showing the death rate per thousand in each state since joining the registration area.

Some allowance must be made in the tables of death statistics for improved collection of statistics. Such allowance would add to the improvement indicated, since fewer deaths would be omitted in the later years, when greater care was exercised in gathering statistics. Some extremely low rates shown in the first year after entry to the registration area should be discounted, for they undoubtedly show carelessness in collection. Each year shows greater perfection in the reporting of deaths, and the results in the registration area may now be considered quite accurate.

Examples

1. Which state showed the lowest death rate in each year?

2. Which has shown the greatest improvement in death rate since 1900? Which the least?

TABLE 110. — DEATH RATE PER 1000 POPULATION, FROM ALL CAUSES, BY REGISTRATION STATES: 1900, 1910, AND 1912–1920

REGISTRATION STATE	1900	1910	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
California		13.5	14 0	14.2	13 3	13.3	13.1	13.3	17.7	13 7	13.6							
Colorado		13.8	12 0	12 1	11 8	12.1	11.2	11.9	19.3	12 9	14.5							
Connecticut	18.0	15.6	14.7	14 7	14.8	14.5	15.8	15 9	20.4	13 3	13.6							
Delaware										15 5	14.6							
District of Columbia	22.3	19.5	17.6	16.4	15.5	16.8	16 3	16.3	22.7	14.7	14.6							
Florida										12 4	13.0							
Illinois									16 2	12 0	12.6							
Indiana	14.2	13.5	13.0	13.2	12.8	12.5	13.4	13.8	16.0	12.7	13.4							
Kansas					10.1	10.5	11.5	11 9	15.1	10.8	11.4							
Kentucky			12.9	13.1	12.9	12.3	12.7	13.8	17.0	12.8	11.8							
Louisiana									18 2	12 9	11 9							
Maine	17.1	17.1	15.6	15.4	15.8	15.9	16.0	15.4	19.1	14.6	15.4							
Maryland		16.0	15.4	16 0	15 6	15.5	16.1	16 7	23.6	15.3	14.7							
Massachusetts	18.3	16.1	15.0	15.1	14 8	14.6	15 3	15.2	20.9	13.6	13.8							
Michigan	14.0	14.1	12.9	13.2	12.5	12.4	13.7	13.7	15.4	12.6	13 9							
Minnesota		10.9	9 5	10.5	10.6	10.2	10 7	10.4	13.4	10.5	10 7							
Mississippi										12 7	12.3							
Missouri			12.7	12 5	12 4	12.2	13.1	13 5	15.9	11 8	12.5							
Montana		10.5	9.8	11.6	10 7	10.8	11.9	13.1	17.3	10.7	9.5							
Nebraska											10.0							
New Hampshire	18.5	17.3	16.5	17.2	16.4	16.2	16.3	17.0	21.8	14.7	15.2							
New Jersey	17.8	15.5	14.1	14.4	14.2	13.9	15.1	14.6	20.6	13.1	13 0							
New York	18.2	16.2	15 2	15.3	15.1	15.0	15.3	15 3	19.0	13.9	13 8							
North Carolina		18.6	17 1	16.5	19.0	17 3	12 9	13.8	17 1	12.2	12 7							
Ohio		13.7	13.1	13.4	12.5	12.5	13.8	14.0	16.8	12.7	12.8							
Oregon									12.8	11.4	11.7							
Pennsylvania		15.6	14.1	14 7	14.1	14.0	14.9	15.2	22.1	13.4	13.8							
Rhode Island	20.5	17.1	15.5	15.4	15.3	15.5	16.3	16.3	20.9	14.2	14.3							
South Carolina							13.9	14.5	19.5	13.8	14.0							
Tennessee								13.4	16.1	12.2	12.1							
Utah		10.9	10.0	11.2	10.3	10.1	10.7	10.8	14.2	11.0	11.5							
Vermont	16.6	16.0	15.3	16.0	15.3	15.0	16.1	15.5	19.4	14.4	15.7							
Virginia				13.8	13.9	14.0	14.5	14.1	19.3	13.7	13.1							
Washington		10.0	8.6	9.4	9.3	9.5	9.2	9.4	13.3	10.7	11.1							
Wisconsin		12.0	11.2	11.4	11.0	10.7	11.7	11.4	13.6	10.7	11.2							
Total	17.2	14.7	13.6	13.9	13.5	13.3	13.9	14.1	18.0	12.8	13.0							

3. Note the trend of the death rate in 1918 and see which states suffered most severely from the influenza epidemic.

4. Find the death rate for your own city and for other cities of the same class and compare.

5. Secure later information from the annual Mortality Statistics published by the U. S. Census Bureau and complete the table.

Age at Death

The study of the age at which people die is both interesting and significant. It is socially important to know, for example, the number of children under one year of age taken off by disease. It is also significant when we learn the trend of the death rate in middle life and in old age.

From this table it is disclosed that a very large number of infants die before reaching one year of age and that nearly 22 per cent of all deaths are of children under five. The table shows also that boys have not so good a chance to live as girls up to the age of fourteen; that from 14 to 35 women have a poorer chance to live than men; and from 35 onward the rate among women is much lower.

Examples

1. From the table of ages in Chapter II take the number of people in each age group by sex and compare with this table.

2. The registration area represented 82.2 per cent of the total population in the United States in 1920. What would be the total deaths in the United States in each age group on that basis?

3. After determining the total deaths in each age group for the whole country, compare the same with the number of people in each age group as shown in Chapter II, and see which age group has the largest death rate; the smallest death rate. Compare the number of deaths per thousand in each age group among males and females.

4. What percentage of all deaths in 1920 were of children under one year of age? What percentage of the total population was under one year of age in 1920?

TABLE III. — DEATHS FROM ALL CAUSES, REGISTRATION AREA, BY AGES: 1920

AGE OF DECEDENT	TOTAL	MALE	FEMALE
All ages	1,142,558	598,994	543,564
Under 1 year	174,710	99,239	75,471
1 year	36,986	19,698	17,288
2 years	16,892	8,921	7,971
3 years	11,369	5,815	5,554
4 years	8,475	4,401	4,074
Under 5 years	248,432	138,074	110,358
5 to 9 years	27,051	14,461	12,590
10 to 14 years	19,450	10,413	9,037
15 to 19 years	31,259	15,910	15,349
20 to 24 years	43,892	20,296	23,596
25 to 29 years	49,753	23,024	26,729
30 to 34 years	50,050	24,678	25,372
35 to 39 years	52,093	27,381	24,712
40 to 44 years	47,609	25,477	22,132
45 to 49 years	51,959	28,569	23,390
50 to 54 years	58,072	32,071	26,001
55 to 59 years	61,678	33,869	27,809
60 to 64 years	72,780	39,745	33,035
65 to 69 years	76,564	41,060	35,504
70 to 74 years	79,584	41,466	38,118
75 to 79 years	73,995	37,238	36,757
80 to 84 years	53,474	25,362	28,112
85 to 89 years	29,403	13,321	16,082
90 to 94 years	10,376	4,284	6,092
95 to 99 years	2,459	954	1,505
100 years and over	961	351	610
Unknown	1,664	990	674

DEATH RATE BY COLOR

The death rates among negroes is considerably higher than among whites and very much higher among negroes under urban conditions. The rates per thousand in the states in the registration area having a considerable negro population are shown next.

TABLE 112. — NEGRO DEATH RATE PER 1000 OF POPULATION, REGISTRATION AREA, BY STATES: 1920

STATE	NEGRO DEATH RATE PER 1000 POPULATION IN 1920
Florida	15.5
Illinois	21.1
Indiana	22.0
Kansas	20.5
Kentucky	19.4
Louisiana	15.3
Maryland	21.2
Massachusetts	21.7
Michigan	24.5
Mississippi	15.1
Missouri	21.0
New Jersey	20.8
New York	19.5
North Carolina	16.1
Ohio	21.1
Pennsylvania	21.
South Carolina	16.6
Tennessee	18.1
Virginia	17.6
District of Columbia	20.6

These figures disclose a very heavy death rate in all states where the negroes live under urban conditions and a much lower rate where they live in rural communities, as in the South. This difference is undoubtedly due to the change to new abnormal and crowded conditions incident upon the migration of the negroes to the northern industrial centers. Throughout the South also the rate of negro deaths in the cities is far in excess of that in the country.

Examples

1. Compare the negro death rate with the total death rate in each state.

2. What are the probable causes of the high negro death rates in certain northern states?

3. At the death rates given in this table what was the total of negro deaths in each state in 1920? (For number of negroes in each state see Chapter II.)

Deaths of Infants

The death rates of children under one year of age are generally calculated on the basis of the number of children under one year of age. Thus a death rate of 100 per thousand indicates that among a thousand infants under one year of age 100 will die within the year. There has been a steady decline in the rate of infant deaths in response to the efforts to provide better care of mothers and babies and more effective education in the care of babies. The rate of infant deaths declined from 162 per thousand in 1900 to 105 per thousand in 1920. That means that out of 1000 babies 57 will live who would have died within the year if the old conditions prevailed.

The figures for the states from which statistics were gathered are given for the years 1900, 1910, and 1920 in Table 113.

Examples

1. Which state in this table has had the greatest improvement in infant mortality since 1900? Which one has had the least improvement?

2. Find the total number of deaths of infants under one year of age in the total population under one year of age in 1920.

3. If the rate for 1900 had prevailed in 1920, how many infants would have died?

4. How many infants were saved that year by the improved conditions of 1910 over 1900 and of 1920 over 1910?

5. If the infant death rate is reduced in the same degree between 1920 and 1930 as between 1910 and 1920, what will be the rate of infant deaths?

TABLE 113. — RATES OF INFANT MORTALITY, REGISTRATION AREA, BY STATES: 1900, 1910, 1920

AREA	DEATH RATE FROM ALL CAUSES FOR CHILDREN UNDER 1 YEAR OF AGE, PER 1000 ESTIMATED POPULATION UNDER 1 YEAR OF AGE		
	1920	1910	1900
Original registration states	105.7	141.5	162.2
REGISTRATION STATES			
California	91.5	91.6	
Colorado	101.9	104.2	
Connecticut	103.1	142.9	177.7
Indiana	95.8	106.9	114.1
Maine	119.9	140.5	154.4
Maryland	125.6	151.9	
Massachusetts	111.0	160.6	189.6
Michigan	108.9	126.8	133.1
Minnesota	75.4	92.3	
Montana	66.3	89.2	
New Hampshire	110.8	165.1	176.0
New Jersey	102.4	148.3	180.5
New York	104.7	143.5	167.4
Ohio	91.0	115.5	
Pennsylvania	109.2	149.6	
Rhode Island	108.3	181.2	215.7
Utah	83.4	82.1	
Vermont	109.0	109.6	126.5
Washington	72.5	84.1	
Wisconsin	84.5	108.0	
District of Columbia	120.9	193.7	284.6

COMPARISONS WITH FOREIGN COUNTRIES

Is the improvement of health noted in this chapter a local phenomenon or does it extend over the world? The answer is that there has been improvement in those countries

TABLE 114. — DEATH RATES OF FOREIGN COUNTRIES PER 1000 POPULATION

COUNTRY	1919	1918	1906 to 1910	1901 to 1905	1896 to 1900	1891 to 1895	1886 to 1890	1881 to 1885	Decrease per cent between 1881 to 1885 and 1906 to 1910.
United States (registration area)	12.9	18.1	15.1	16.2					
Australian Commonwealth	12.8	10.1	10.7	11.7	12.7	13.3	14.8	15.7	31.8
Austria			22.3	24.2	25.6	27.9	28.9	30.1	25.9
Belgium	14.7	21.0	15.9	17.0	18.1	20.1	20.2	20.6	22.8
Ceylon	35.6	31.9	30.8	26.7	27.0	28.3	25.1		
Chile		27.5	31.3	30.2	28.8	32.6	35.2	26.9	16.4
Denmark	13.1	13.1	13.7	14.8	16.4	18.6	18.7	18.4	25.5
England and Wales	13.7	17.6	14.7	16.0	17.7	18.7	18.9	19.4	24.2
Finland		28.5	17.4	18.6	19.0	20.5	20.0	22.2	21.6
France	19.1	24.0	19.2	19.6	20.7	22.3	22.0	22.2	13.5
Germany			17.5	19.9	21.2	23.3	24.4	25.3	30.8
Hungary			25.0	26.4	27.9	31.8	32.1	33.1	24.5
Ireland	17.6	17.9	17.3	17.6	18.1	18.5	17.9	18.0	3.9
Italy	19.0	32.3	21.0	21.9	22.9	25.5	27.2	27.3	23.1
Jamaica	22.2	33.0	24.4	22.6	22.1	22.0	23.5		
Japan			21.0	20.9	20.7	21.1	20.6		
Netherlands	13.2	17.1	14.3	16.0	17.2	19.6	20.5	21.4	33.2
New Zealand	9.5	14.8	9.7	9.9	9.6	10.1	9.9	10.9	11.0
Norway	17.1	16.3	13.8	14.5	15.6	16.8	17.0	17.2	19.8
Ontario, Province of	11.9	15.3	14.0	13.0	11.6	10.6	11.0	11.4	22.8
Rumania		41.2	26.0	25.5	27.4	31.0	28.7	26.2	0.8
Scotland	15.4	16.0	16.1	17.0	18.0	19.0	18.8	19.6	17.9
Spain	23.3	33.1	24.3	26.0	28.8	30.1	30.9	32.6	25.5
Sweden	14.4	17.9	14.3	15.5	16.1	16.6	16.4	17.5	18.3
Switzerland	14.0	19.0	16.0	17.5	18.1	19.8	20.4	21.3	24.9

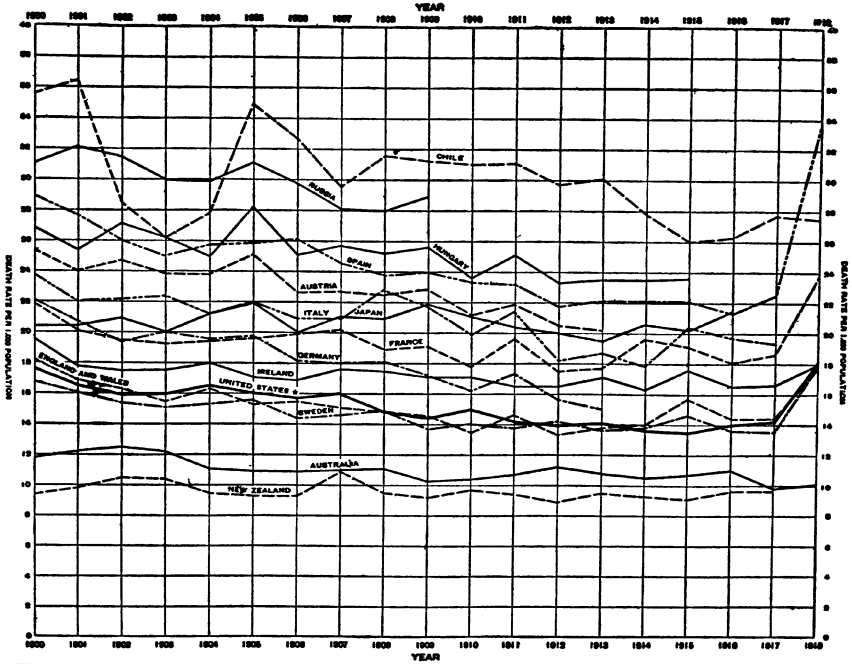


FIGURE 60. — GENERAL DEATH RATE OF THE UNITED STATES (REGISTRATION AREA) AND CERTAIN FOREIGN COUNTRIES FOR EACH OF THE YEARS: 1900–1918

which have made the effort to provide health aids and protection, while in other countries no progress has been made. Comparisons with European countries during the years 1914 to 1924 are, of course, not fair unless we take into account the ravages of the war.

Table 114, taken from the *United States Census Report on Mortality Statistics*, indicates the status and progress of foreign countries for those years for which the facts are obtainable.

Death Rates in City and Country

Table 115. — Death Rate from All Causes per 1000 Population

(From the U. S. Census Bureau Mortality Report)

	Average 1906–1910	1912	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
Cities . .	16.4	14.9	15.2	15.2	19.3	13.5	13.7	11.8						
Rural . .	14.2	13.9	14.6	14.6	18.1	13.4	14.0	12.9						

Examples

1. Has improvement in health been greater in the city or the rural districts since 1906?
2. How many lives were saved in the cities in 1921 over 1906–10?
3. If the rural health improved as rapidly as the city health, what would be the rate in 1921?
4. Estimate the number of deaths in the cities and rural communities in 1920.

Rates of Sickness

The amount of sickness is not known exactly at any given time, for no statistics are systematically gathered on this subject. From numerous surveys, however, it is possible

to estimate with a fair degree of accuracy the number of sick people and the duration of sickness. A large insurance company a few years ago made a house-to-house canvass in a number of cities of its policy holders, who were mostly among the industrial classes, to determine how many people were disabled. The results varied according to season and to differences in health conditions in cities, but indicated that, on the average, the people of working ages have from 8 to 9 days' sickness each year.

More exact statistics were gathered by several state commissions which investigated the feasibility of health insurance from 1915 to 1919. These statistics were taken from the experience of large employers who conducted health insurance schemes. The final deductions from these state studies were that workers on the average are sick about 9 days each year and lose on the average about 7 to 7½ days from work on account of sickness. These figures are now accepted as the normal rate for the working people. The burden of sickness can, therefore, be readily figured for any group of workers or the total working population.

Examples

1. How many days were lost on account of sickness by all the persons gainfully employed in 1920?

2. What would be the total wage loss at the rate of $4.00 per day? At $5.00 per day?

Some Specific Improvements

With some diseases public activity is more spectacular in its results than with others. Diseases such as typhoid fever and smallpox readily succumb to science and community organization. Two generations ago smallpox was a terror to the people, but vaccination and quarantine

have practically conquered this disease. In the *U. S. Census Bureau Report on Mortality Statistics, 1920,* it is stated: "Not for many years has smallpox been an important cause of death in this country. Since 1904 the rate has never reached one per hundred thousand population." Typhoid fever has steadily lost its grip. In 1911 21 out of every 100,000 people died of this disease; in 1920 only 7.8 deaths per 100,000 population were from this cause. Large cities like Chicago practically eliminated the disease by sanitary works and regulations. A city to-day which has a high rate from typhoid stands disgraced, because typhoid can be prevented by public action.

Tuberculosis is another disease which retreats before the community attack, though more slowly than typhoid or smallpox. It is not so easily preventable and yet a steady reduction has taken place. In 1900 the rate for all forms of tuberculosis was 195 per 100,000 population; in 1920 it was 112. Thus a saving of 83 per 100,000 population resulted from the persistent efforts of public and private agencies to improve living conditions in order to prevent the disease.

Other forms of contagious diseases show marked improvements. Some diseases as yet show no change for the better, but science finds new ways of attack and we may expect new victories from time to time. At least the outlook is hopeful and encouragements for continued personal and community effort are ever present.

Example

1. Find the death rate in your state and city from typhoid fever, smallpox, diphtheria, tuberculosis, pneumonia, scarlet fever, and cancer, and compare with the rates for the country as a whole.

Sources for Research

1. The report of the city Department of Health gives valuable data regarding the health progress of the city. Many city Boards of Health also issue weekly or monthly reviews of health. These reports should be secured for the latest years. They contain the statistics of births and deaths.

2. The state Board or Commissioner of Health prepares an annual report and in some instances weekly or monthly reports. These contain the birth and death statistics compiled for the state.

3. The U. S. Census Bureau compiles from state and city reports the complete statistics of births and deaths for the entire country and issues an annual volume entitled *Mortality Statistics*. This volume should be at hand for special study.

4. The U. S. Public Health Service makes researches and publishes a great amount of information concerning health problems.

5. The U. S. Children's Bureau publishes information on infant mortality in special studies and annual reports.

CHAPTER XII

INCOME AND STANDARDS OF LIVING

Wages and Cost of Living

Social Science considers as of vital significance the standards of living of the people and the extent to which the most poorly paid workers are able from their earnings to approximate a minimum of frugal comfort. The well-being of the great mass of people is bound up in the subject of income and cost of living. It is plainly important that each person should have enough to support life, else he would soon be physically weakened as a worker. It is important that he have enough to provide for healthy living, else he will grow old before his time and be discarded from the rank of workers while he still must somehow go on living. It is important that every worker should have the necessaries and comforts of life and even some of the luxuries to make him a contented and progressive member of society. Lastly, it is important that the worker have enough to properly feed, clothe, and care for his family, and to educate his children for the future welfare of society.

All of this means that the wages or income of a worker ought to be sufficient to buy the things which are necessary for the comfortable living of himself and family. The cost of living must, therefore, play an important part in the consideration of this question. Obviously the amount of wages or income is unimportant unless measured by what the worker can buy with what he receives. If the wages a man

receives will not buy enough food and clothing and pay rent and living expenses at prevailing prices, then it is unimportant whether the amount of the wage be high or low — it does not provide for a minimum standard of living. If wages increase but the cost of living increases faster still, the increased wages will not permit the worker to maintain even his former standards. If a man is barely subsisting on a certain wage and the wage is increased 50 per cent while the cost of food, clothing, and shelter increases 75 per cent, then his standard of living is plainly lowered. He must get along with fewer of the necessities of life. These facts are so obvious that they should not need a formal statement, and yet they seem not to be understood by all of those responsible for fixing wages.

The efforts to cut wages after the war when prices of necessaries were still increasing was an evidence of the lack of simple elementary understanding of the relation of cost of living to minimum wages.

The relation of wages and cost of living is graphically shown by the chart below which is prepared regularly by the New York State Industrial Commission. The three lines represent wages, cost of living, and retail prices of food. Starting in 1914 the rate of wages steadily increased until the middle of 1920; the cost of living and retail food prices likewise increased in the main along with wages until 1920, when sharp declines in both took place.

Lifetime Income

In considering the cost of living, it is not the cost for the day or the week which must be considered but for the year and for life. A man must earn to-day not merely enough for this day but also for the days when through disability

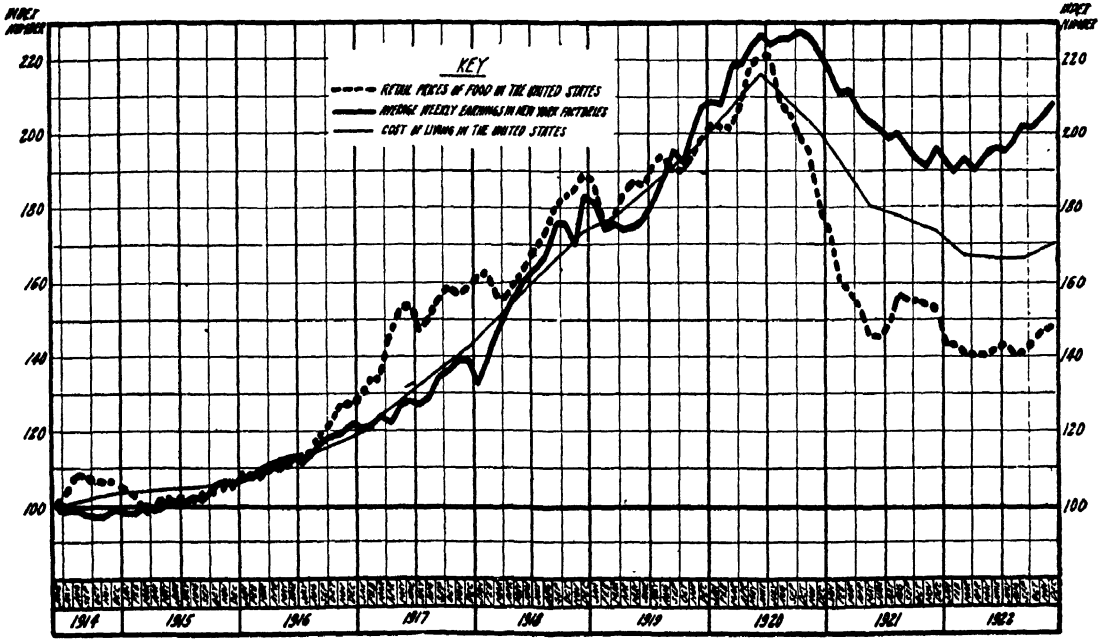


FIGURE 61. — COMPARISON OF COURSE OF AVERAGE WEEKLY EARNINGS IN NEW YORK STATE FACTORIES WITH COST OF LIVING IN THE UNITED STATES

he is not able to earn. A wage, to be socially sound, must be sufficient to pay the current cost of living and to lay aside in savings or insurance enough to meet the contingencies of his working years, such as sickness, accident, and unemployment, and to provide for his old age when work can no longer be had or performed. This, too, should be an obvious fact to all and yet seldom does the employer or employee take this vital matter into account. In his book, *Facing Old Age*, Epstein says, "The plain fact is that the prevailing standard of daily wage is generally based upon the daily minimum needs and permits of little or no saving. Rarely is it taken into consideration by either party to the labor contract in modern society that the basis of the daily wage must make provision for such exigencies as sickness, accident, disability, and old age. Wage rates to-day depend largely upon demand and supply, and when labor is purchased as a commodity in the open market it is naturally bought at the lowest possible price. Such a bargain obviously takes into consideration only the essential and immediate needs of the wage earner and his family."

Income in the United States

The only complete picture of income for the whole country is given in the income-tax returns to the Federal Government. The income tax is imposed upon net incomes over $1000 in the case of single individuals and over $2000, plus exemptions for dependent children, for persons who are heads of families — that is, all incomes below $1000 and $2000 in the classes respectively are exempt. Keeping in mind that in 1920 there were 41,614,248 persons over 10 years of age engaged in gainful employment, we may make some fruitful comparisons.

For the year 1922 the number of people filing income-tax returns was 6,787,481. The number was 6,662,176 for 1921; 7,259,944 for 1920; and 5,332,760 for 1919. Since 1920 the number has decreased, that year being the peak year when the higher incomes of 1919 were reported. Thus in 1922, a little over one sixth of the gainfully occupied persons reported incomes of $1000, if single; or $2000, if the head of a family. The number of families reported in 1920 was 24,351,676, which means that less than 30 per cent of the heads of families reported taxable incomes.

The millions who reported incomes in 1922 gave their total income as $21,400,000,000. We do not know the incomes of the other 34 or 35 million workers.

It must be concluded that the great majority, fully 70 per cent of heads of families and 90 per cent of the persons engaged in gainful employment, had incomes of less than $2000 a year.

Table 116 brings out the comparison of incomes by size for a period of years.

Examples

1. What was the trend of income in each group from 1915 to 1922?
2. Account for the great differences in incomes in these years.
3. What percentage of the total number of incomes was in each class?

The number reporting incomes in 1920 classified by size with total amount of incomes is given in Table 117.

This table shows that 5,241,266 people had net incomes of less than $3000 and a total income of $11,806,769,000, which made an average of about $2250 each. Those who had incomes over $3000 numbered 2,018,678, which was the bulk of those who had sufficient to live comfortably under urban conditions.

TABLE 116. — NUMBER OF PERSONAL RETURNS, BY INCOME CLASSES: 1914–1922

INCOME CLASSES	1915	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927
Under $1,000						401,849	402,076					
$1,000 to $2,000		1,640,758	1,516,938	1,924,872	2,671,950	2,440,544	2,471,181					
$2,000 to $3,000		838,707	1,496,878	1,569,741	2,569,316	2,222,031	2,129,898					
$3,000 to $4,000	69,045	374,958	610,095	742,334	894,559	702,991	785,267					
$4,000 to $5,000	58,949	185,805	322,241	438,154	442,557	369,155	404,848					
$5,000 to $10,000	120,402	270,666	319,356	438,851	455,442	353,247	391,373					
$10,000 to $15,000	34,102	65,800	69,992	97,852	103,570	80,014	90,278					
$15,000 to $20,000	16,475	29,896	30,227	42,028	44,531	34,230	39,605					
$20,000 to $25,000	9,707	16,806	16,350	22,605	23,729	18,100	21,446					
$25,000 to $30,000	6,196	10,571	10,206	13,769	14,471	10,848	13,225					
$30,000 to $40,000	7,005	12,733	11,887	15,410	15,808	12,047	14,283					
$40,000 to $50,000	4,100	7,087	6,449	8,298	8,269	6,051	7,970					
$50,000 to $100,000	6,847	12,439	9,996	13,320	12,093	8,717	12,000					
$100,000 to $150,000	1,793	3,302	2,358	2,983	2,191	1,367	2,171					
$150,000 to $200,000	724	1,302	866	1,092	590	450	763					
$200,000 to $250,000	386	703	401	522	307	205	350					
$250,000 to $300,000	216	342	247	250	166	84	210					
$300,000 to $400,000	254	380	260	285	169	98	205					
$400,000 to $500,000	122	179	122	140	70	64	104					
$500,000 to $1,000,000	209	315	178	189	123	63	161					
$1,000,000 and over	120	141	67	65	33	21	67					
Total	336,652	3,472,890	4,425,114	5,332,760	7,259,944	6,662,176	6,787,481					

TABLE 117. — INCOME TAX PAYERS: 1920

INCOME CLASS	NUMBER OF RETURNS	TOTAL INCOME
		1,000 dollars
$1,000 to $2,000 [1]	761,995	1,337,393
$1,000 to $2,000	1,909,955	2,940,248
$2,000 to $3,000 [1]	930,659	2,243,748
$2,000 to $3,000	1,638,657	4,285,380
$3,000 to $4,000 [1]	37,564	151,598
$3,000 to $4,000	856,995	3,177,736
$4,000 to $5,000 [1]	11,416	64,171
$4,000 to $5,000	431,141	2,114,434
$5,000 to $6,000	177,147	1,135,872
$6,000 to $7,000	112,444	856,140
$7,000 to $8,000	74,511	653,155
$8,000 to $9,000	51,211	515,006
$9,000 to $10,000	40,129	455,070
$10,000 to $11,000	29,984	381,224
$11,000 to $12,000	24,370	338,493
$12,000 to $13,000	19,388	295,115
$13,000 to $14,000	16,089	268,601
$14,000 to $15,000	13,739	242,341
$15,000 to $20,000	44,531	937,665
$20,000 to $25,000	23,729	659,698
$25,000 to $30,000	14,471	489,969
$30,000 to $40,000	15,808	677,976
$40,000 to $50,000	8,269	463,502
$50,000 to $60,000	4,785	336,367
$60,000 to $70,000	3,006	248,888
$70,000 to $80,000	1,969	189,610
$80,000 to $90,000	1,356	146,336
$90,000 to $100,000	977	118,510
$100,000 to $150,000	2,191	347,575
$150,000 to $200,000	590	131,866
$200,000 to $250,000	307	93,256
$250,000 to $300,000	166	62,302
$300,000 to $400,000	169	79,179
$400,000 to $500,000	70	45,016
$500,000 to $750,000	98	75,764
$750,000 to $1,000,000	25	26,117
$1,000,000 to $1,500,000	19	27,084
$1,500,00 to $2,000,000	3	9,152
$2,000,000 to $3,000,000	4	13,900
$3,000,000 to $4,000,000	3	13,357
$4,000,000 to $5,000,000		
$5,000,000 and over	4	41,455
Total	7,259,944	26,690,270

[1] Indicates persons reporting but not taxable because net income did not equal $1000 in case of single persons or $2000 in case of heads of families.

Examples

1. What was the average income in each group in 1920?
2. What percentage of the whole income was received by persons having incomes of $500,000 or more? By persons having incomes of $100,000 to $500,000? By persons having incomes of $10,000 to $100,000? By persons having less than $10,000 incomes?

The number of incomes and total incomes by states is shown in Table 118.

Examples

1. What percentage of the population in each state is represented by the income-tax returns? What state has the largest percentage? The smallest?
2. What percentage of the total returns was from each state?
3. What percentage of the total income was in each state?

Income of Farmers

The income of farmers is not easily determined, but there are certain general estimates that may be made. In 1922, the value of farm crops reported for the United States by the Department of Agriculture was $8,961,000,000, and the value of livestock produced was $5,349,000,000. The total number of farms in the country was 6,448,343 in 1920. The average return for that number of farms was, therefore, about $1400 per farm for farm products and about $830 for livestock. Probably half or more of the value of livestock was represented by the feeding of farm products, so that the total net average was not over $400 per farm for livestock, thus making a total of not over $1800 income per farm. The cost of the three major items of expenditure on the farm — labor, fertilizer, and feed — amounted to fully $300 per farm. (The average was $431 in 1919.)

TABLE 118. — PERSONAL RETURNS, BY STATES AND TERRITORIES: 1922

STATES AND TERRITORIES	POPULATION AS OF JULY 1, 1922 (ESTIMATED BY BUREAU OF THE CENSUS)	RETURNS	NET INCOME	TAX
		Number	Amount	Amount
Alabama	2,402,273	43,612	$126,908,473	$2,892,298
Alaska	55,036			
Arizona	367,589	20,079	48,459,738	687,026
Arkansas	1,797,978	32,072	95,625,678	2,314,409
California	3,697,070	420,923	1,357,524,521	43,778,932
Colorado	975,837	67,463	184,572,407	4,869,555
Connecticut	1,449,097	128,431	401,720,143	13,130,562
Delaware	228,330	17,141	53,981,068	1,833,712
District of Columbia	437,571	77,923	231,328,739	8,336,587
Florida	1,024,054	41,531	132,047,020	4,059,859
Georgia	2,969,664	69,988	199,432,531	4,557,769
Hawaii	272,392	11,597	37,122,696	1,387,398
Idaho	459,233	23,369	51,166,793	478,706
Illinois	6,703,312	614,449	1,927,637,451	77,196,407
Indiana	2,989,493	153,469	426,365,818	9,578,511
Iowa	2,450,180	131,870	359,562,822	5,466,397
Kansas	1,789,423	86,915	211,061,984	3,246,097
Kentucky	2449,263	69,666	200,048,892	4,676,804
Louisiana	1,835,106	66,972	203,664,606	5,353,574
Maine	774,617	43,041	129,857,441	3,896,892
Maryland	1,489,399	110,896	386,830,235	15,363,765
Massachusetts	3,977,490	397,241	1,237,893,477	57,781,194
Michigan	3,889,418	267,953	796,411,946	34,965,003
Minnesota	2,467,318	122,885	348,740,625	9,419,301
Mississippi	1,790,618	26,897	76,981,743	1,803,632
Missouri	3,432,566	173,728	526,387,658	15,972,706
Montana	593,396	38,044	83,903,851	1,029,195
Nebraska	1,323,193	67,503	177,969,193	3,165,433
Nevada	77,407	9,723	22,397,460	258,732
New Hampshire	446,304	31,787	85,577,058	2,133,631
New Jersey	3,315,231	301,834	1,032,262,375	40,982,616
New Mexico	368,861	11,553	28,982,814	383,750
New York	10,712,680	1,102,748	4,110,588,989	273,960,079
North Carolina	2,649,982	58,009	171,929,259	4,908,611
North Dakota	664,850	18,750	43,767,089	453,219
Ohio	6,014,914	364,988	1,138,934,714	39,310,406
Oklahoma	2,123,851	72,063	217,555,604	6,414,336
Oregon	811,875	61,879	161,226,232	4,239,789
Pennsylvania	8,991,666	587,770	2,005,570,020	93,573,559
Rhode Island	620,308	50,076	171,409,669	9,351,580
South Carolina	1,727,070	26,830	72,755,770	1,268,305
South Dakota	650,108	21,465	48,949,551	548,688
Tennessee	2,377,308	63,555	190,723,937	4,902,612
Texas	4,860,658	186,865	545,901,576	14,119,655
Utah	468,979	27,325	67,744,653	955,929
Vermont	352,428	17,901	51,653,367	1,573,555
Virginia	2,372,940	71,523	207,277,342	4,919,485
Washington	1,466,926	123,216	300,523,342	5,148,477
West Virginia	1,526,169	69,501	196,777,359	4,594,653
Wisconsin	2,708,858	160,519	401,670,058	9,126,855
Wyoming	206,875	21,943	48,826,743	687,062
Total	109,552,128	6,787,481	21,336,212,530	861,057,308

In addition there must be considered the depreciation of the buildings and equipment, which would be considerable. The average value of farms and equipment was $12,084, which at 6 per cent interest makes an interest charge of $724 per farm. The values were considerably lower than that in 1922, but must have averaged at least $9000 per farm or $540 interest charges. It will be seen that the average return to the farmer over and above expenditures and depreciation could not have been over $800 or $1000 in 1922.

Examples

1. Estimate the average income per farm for each year from 1917 to 1922 on the basis of the number of farms in 1920.
2. The number of farms in 1909 was 6,361,502. What was the average value of products per farm at that time?

The wages of farm laborers are comparatively low, but the usual cost of living in the rural districts is also much lower than in the industrial centers. The wages with and without board reported by the U. S. Department of Agriculture for the years 1866 to 1922 are given in Table 119.

Examples

1. Make a chart showing by a line the trend of farm wages both with and without board since 1866.
2. Discuss the relation of these wages to the problem of a living wage.

Wages in Manufactures

There were employed in manufacturing in 1921 an average of 6,946,570 employees classified as wage earners. Their total income was $8,200,324,339, or an average of $1180. Since there were many thousands of men irregularly employed, the average of all who engaged at some time

TABLE 119. — WAGES OF HIRED FARM LABOR: MONTHLY, WITH AND WITHOUT BOARD: 1866–1922

YEAR	BY THE MONTH	
	With Board	Without Board
	Dollars	*Dollars*
1866	17.45	26.87
1869	16.55	25.92
1875	12.72	19.87
1879	10.43	16.42
1882	12.41	18.94
1885	12.34	17.97
1888	12.36	18.24
1890	12.45	18.33
1892	12.54	18.60
1893	13.29	19.10
1894	12.16	17.74
1895	12.02	17.69
1898	13.43	19.38
1899	14.07	20.23
1902	16.40	22.14
1910	19.21	27.50
1911	20.18	28.77
1912	20.81	29.58
1913	21.38	30.31
1914	21.05	29.88
1915	21.26	30.15
1916	23.25	32.83
1917	28.87	40.43
1918	34.92	48.80
1919	39.82	56.29
1920	46.89	64.95
1921	30.14	43.32
1922	29.17	41.79
1923		
1924		
1925		
1926		
1927		

during the year in manufacturing was considerably lower than this figure. Comparative figures are given for certain years in the following table.

TABLE 120. — WAGE EARNERS IN MANUFACTURING INDUSTRIES

	AVERAGE NUMBER	WAGES
1879	2,732,595	$947,953,795
1889	4,251,535	1,891,209,696
1899	4,712,763	2,008,361,119
1904	5,468,383	2,610,444,953
1909	6,615,046	3,427,037,884
1914	7,036,337	4,079,332,433
1919	9,096,372	10,533,600,340
1921	6,946,570	8,200,324,339
1924		
1929		

Examples

1. Find the average wage in each year.
2. In which year was the highest average wage? In which the lowest?
3. Account for the differences in number of employees.

INCOME OF RAILWAY WORKERS

Another large group of workers whose incomes have been ascertained over a period of years is that of the railroad employees. Since 1895 the Interstate Commerce Commission has tabulated the wages of railway workers.

Examples

1. Find the average income per worker in each year.
2. In which year was the highest average wage? In which the lowest?
3. Compare the trend of the average number of employees and amount of wage with that for manufactures.

TABLE 121. — RAILWAY EMPLOYEES AND TOTAL COMPENSATION

YEAR ENDED	AVERAGE NUMBER EMPLOYEES	TOTAL YEARLY COMPENSATION
June 30:		
1895	785,034	445,508,261
1900	1,017,653	577,264,841
1905	1,382,196	839,944,680
1910	1,699,420	1,143,725,306
1911	1,699,809	1,208,466,470
1912	1,716,380	1,252,347,697
1913	1,815,239	1,373,830,589
1914	1,710,296	1,381,117,292
1915	1,491,849	1,236,305,445
1916	1,599,158	1,366,100,519
Dec. 31:		
1916	1,647,097	1,468,576,394
1917	1,732,876	1,739,482,142
1918	1,841,575	2,613,813,351
1919	1,913,422	2,843,128,432
1920	2,022,832	3,681,801,193
1921	1,660,617	2,765,236,353
1922	1,645,244	2,669,180,772
1923		
1924		
1925		
1926		
1927		

The figures given in this table indicate the average number of employees. Since the actual number was higher than the average, it follows that each employee actually received less than the average wage indicated.

ESTIMATES OF THE COST OF LIVING

What constitutes a living wage for an average family of two adults and three children? This question has been asked and answered many times in the last twenty years. Obviously the first consideration in answering it is the locality. It is cheaper to live in the rural communities than in the small town. It is cheaper to live in small towns

than in cities, and cheaper in small than in large cities. Climate also makes a difference in cost, since different demands for fuel, shelter, clothing, and even food are made in the northern and the southern states of the Union.

We must take, therefore, some standard for study and since the problem of securing a living wage rests most heavily upon the industrial classes in the cities, we shall consider the estimates of the cost of living there.

Estimates of the cost of living for an average family of five have been made with frequency by social, economic, and government departments during the quarter of a century following 1900. These estimates have necessarily been adjusted from time to time on account of the changes in prices for necessaries.

The consensus of opinion was that during the early years of this century anything less than $600 was not a living wage. Yet hundreds of thousands of workers were receiving much less than that at the time. By 1908 the cost of living had increased so that authoritative estimates of a living family wage ranged above $800 a year. By 1914 a conservative social economist, Jacob H. Hollander, declared, "In order to maintain a decent standard of living in the United States for an average family of five, an annual income of $600 to $700 is insufficient; $700 to $800 requires exceptional management and escape from extraordinary disbursements consequent upon illness and death; and $825 provides the maintenance of a proper family standard." The New York Factory Investigating Commission in 1914 fixed $875 as the minimum living wage. Yet even then a great part of the workers were receiving less than this minimum standard.

With the outbreak of the war in 1914 all previous cal-

culations had to be cast into the discard, for prices rose with great rapidity, reaching a point more than twice the pre-war level. By the end of 1918 authoritative estimates fixed the cost of living at $1500 to $1700. The War Labor Board drew up a minimum comfort budget of $1760. Later estimates, when the peak of war prices was reached, fixed a living family wage at more than $2000. While some decline in prices prevailed since then it has not been sufficient to warrant an estimate lower than $1600 for an existence budget and from $1600 to $1800 as a minimum comfort budget. Proposals for cutting wages must therefore mean that workers are to be reduced below the point of comfortable existence since at no time except for a few brief weeks did the increase in wages equal the increase in cost of living.

All thinking on this subject must be guided by the price changes for the major items of the cost of living. The U. S. Department of Labor Statistics publishes index numbers of the cost of living. Starting at 100 in 1913 the Bureau calculates the increases in the major items of living cost and shows by averages what relation the cost bears to that of 1913. The trend is shown in Figure 62.

Home Ownership

One test of the distribution of the social product is found in home ownership. People have the desire to possess a home above all other things, and many will make that the object of their first striving. Yet more than half of the homes in which people live are rented, and the percentage of rented homes is increasing. The Census of 1920 found 24,351,676 homes. Of these there were 13,236,709 rented and 11,114,967 owned. Slightly more than 60 per cent

TREND IN RETAIL PRICES OF FOOD IN THE UNITED STATES, JANUARY, 1915, TO NOVEMBER, 1924

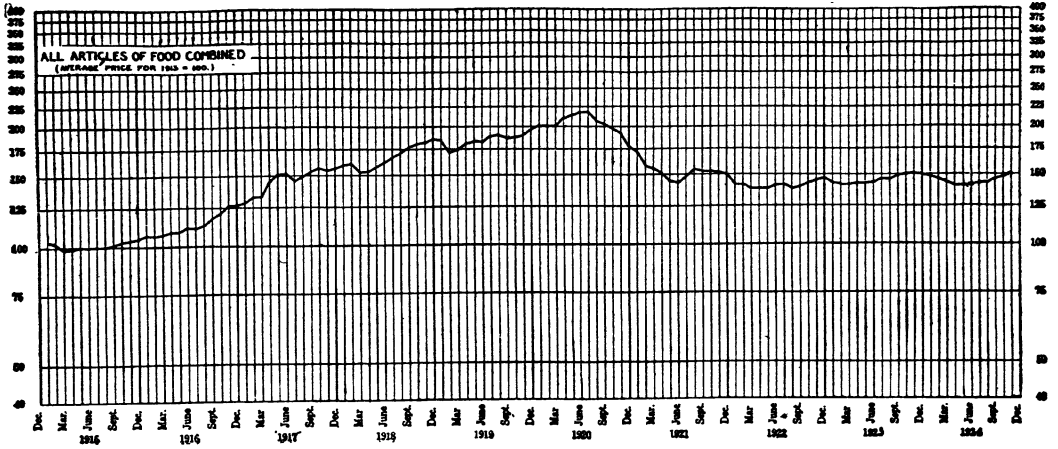


FIGURE 62

of the owned homes were free from debt, there being 6,862,520 free homes and 4,252,447 encumbered with debt. The changes in respect to home ownership are disclosed by Table 123 from the U. S. Census Bureau.

Home ownership varied somewhat in the different sections as shown next for the geographic divisions.

TABLE 122. — DISTRIBUTION OF HOMES ACCORDING TO PROPRIETORSHIP AND ENCUMBRANCE, FOR THE UNITED STATES: 1890–1920

[In compiling this table the unknown items as to proprietorship and encumbrance have been distributed in the same proportions as the known items.]

CENSUS YEAR	TOTAL	RENTED	TOTAL OWNED	OWNED FREE	OWNED ENCUMBERED
1920	24,351,676	13,236,709	11,114,967	6,862,520	4,252,447
1910	20,255,555	10,982,380	9,273,175	6,236,074	3,037,101
1900	16,187,715	8,719,060	7,468,655	5,127,935	2,340,720
1890	12,690,152	6,623,735	6,066,417	4,369,527	1,696,890

Examples

1. Distribute the unknown items in this table in the same proportion as the known items. For example the column "Tenure Unknown" should be distributed in the ratio that the total of homes owned bears to homes rented.

2. What was the percentage of homes owned in each section? Arrange the sections in order of home ownership.

3. In which section is there the greatest percentage of homes owned free?

4. Find the percentage of homes owned at each census since 1890.

5. The *Abstract of the Fourteenth Census* gives the facts of home ownership for each state and for all of the larger cities in 1920 and 1910. Find the number in your own state and city. Arrange the states in the order of extent of home ownership. What cities have a high percentage of homes owned and what cities have small percentages?

6. Why is the number of homes owned in large cities like New York and Chicago comparatively small?

TABLE 123. — NUMBER OF HOMES, DISTRIBUTED ACCORDING TO PROPRIETORSHIP: 1920

DIVISION	TOTAL HOMES	RENTED	TOTAL OWNED	OWNED FREE	OWNED ENCUMBERED	UNKNOWN	TENURE UNKNOWN
United States	**24,351,676**	**12,943,598**	**10,866,960**	**6,522,119**	**4,059,593**	**285,248**	**541,118**
GEOGRAPHIC DIVISIONS:							
New England	1,703,812	1,010,586	668,324	335,753	322,064	10,507	24,902
Middle Atlantic	5,085,080	3,144,533	1,864,123	934,703	892,787	36,633	76,424
East North Central	5,143,913	2,407,639	2,644,052	1,510,174	1,069,927	63,951	92,222
West North Central	2,957,849	1,257,816	1,626,771	952,049	631,238	43,484	73,262
South Atlantic	2,991,628	1,684,936	1,221,214	896,122	281,864	43,228	85,478
East South Central	1,977,381	1,101,352	823,131	617,367	181,669	24,095	52,898
West South Central	2,242,810	1,252,703	913,378	613,789	262,404	37,185	76,729
Mountain	803,853	349,755	431,039	269,907	149,458	11,674	23,059
Pacific	1,445,350	734,278	674,928	392,255	268,182	14,491	36,144

Saving Deposits

Another form of property widely diffused is the savings deposited by millions in savings banks. There were over twelve and one-half millions of such depositors in 1922 and the total of these deposits was over seven billion dollars. The number and growth of savings depositors and deposits are found in the previous table. It should be noted, however, that the number of depositors given does not represent the number of different individuals, since one person may have two or more deposits.

The Federal Government promotes savings by the Postal Savings Bank, which was established in 1911. There were 420,242 depositors with a total of $132,655,147 on June 30, 1924. The postal savings deposits reached the high point in 1919 when $167,323,260 were on deposit. The decrease has been due to the use of other forms of savings and to the decrease in the income of the masses of people since the war. Since 1912 the deposits have been as follows: 1912 — 20,237,084; 1913 — 33,818,870; 1914 — 43,444,271; 1915 — 65,684,708; 1916 — 86,019,885; 1917 — 131,954,696; 1918 — 148,471,499; 1919 — 167,323,260; 1920 — 157,296,322; 1921 — 152,389,903.

Other forms of property widely held are U. S. Liberty Bonds, War Saving Stamps and Certificates, and U. S. Treasury Saving Certificates, and many forms of insurance. It is impossible to determine how many people have accumulated some property, but the fact is inescapable that vast numbers have not accumulated enough to withstand the calamities of life. It has been estimated that fully 10 per cent of the people of this country are in actual poverty or so near it that they lead a precarious existence. This

estimate is pretty generally accepted by conservative investigators. If that be true, then it follows that there are millions between the limits of precarious living and the better-to-do who own a savings deposit, an endowment insurance policy, or a home.

TABLE 124. — DEPOSITORS IN SAVINGS BANKS

YEAR	DEPOSITORS IN SAVINGS BANKS	SAVINGS BANKS	YEAR	DEPOSITORS IN SAVINGS BANKS	SAVINGS BANKS
	Number	*Dollars*		*Number*	*Dollars*
1800			1895	4,875,519	1,844,357,798
1810			1896	5,065,494	1,935,466,468
1820		1,138,576	1897	5,201,132	1,983,413,564
1830		6,973,304	1898	5,385,746	2,028,208,409
1840		14,051,520	1899	5,687,818	2,182,006,424
1850		43,431,130	1900	6,107,083	2,389,719,954
1855	8,635	84,290,076	1901	6,358,723	2,518,599,536
1860	38,035	149,277,504	1902	6,666,672	2,650,104,486
1865	78,701	242,619,382	1903	7,035,228	2,815,483,106
1870	251,354	549,874,358	1904	7,305,443	2,918,775,329
1871	431,602	650,745,442	1905	7,696,229	3,093,077,357
1872	693,870	735,046,805	1906	8,027,192	3,299,544,601
1873	980,844	802,363,609	1907	8,588,811	3,495,410,087
1874	1,630,846	864,556,902	1908	8,705,848	3,479,192,891
1875	2,359,864	924,037,304	1909	8,831,863	3,713,405,710
1876	2,368,630	941,350,255	1910	9,142,908	4,070,486,247
1877	2,395,314	866,218,306	1911	9,794,647	4,212,583,599
1878	2,400,785	879,897,425	1912	10,010,304	4,451,555,688
1879	2,268,707	802,490,298	1913	10,766,936	4,726,472,768
1880	2,335,582	819,106,973	1914	11,109,499	4,936,591,849
1881	2,528,749	891,961,142	1915	11,285,755	4,997,706,013
1882	2,710,354	966,797,081	1916	11,148,392	5,088,587,295
1883	2,876,438	1,024,856,787	1917	11,367,013	5,418,022,275
1884	3,015,151	1,073,294,955	1918	11,379,553	5,471,579,949
1885	3,071,495	1,095,172,147	1919	11,434,881	5,902,577,000
1886	3,158,950	1,141,530,578	1920	11,427,556	6,536,596,000
1887	3,418,013	1,235,247,371	1921	10,737,843	6,018,166,000
1888	3,838,291	1,364,196,550	1922	12,538,997	7,181,248,000
1889	4,021,523	1,444,391,325	1923		
1890	4,258,893	1,550,023,956	1924		
1891	4,533,217	1,654,826,142	1925		
1892	4,781,605	1,758,329,618	1926		
1893	4,830,599	1,808,800,262	1927		
1894	4,777,687	1,777,833,242			

Examples

1. Find the number of savings depositors and amount of deposits in the latest year available in the *Statistical Abstract of the United States*.

2. Secure the latest data on postal savings depositors and deposits.

Sources for Research

1. The Internal Revenue Department at Washington publishes the analyses of personal income taxes, showing in detail the classification by size, source, distribution geographically, and by occupations. The latest reports should be secured for comparison with the text to show the trends.

2. The U. S. Department of Labor Statistics publishes regularly in its *Monthly Labor Review* the trend of wages in skilled employment and also the trend of the cost of living. Special studies are being constantly produced on various phases of the questions in this chapter.

3. The State Labor departments or Industrial commissions publish much valuable information about wages and other matters. The New York State Industrial Commission makes especially valuable reports on the trend of wages and cost of living.

4. The National Industrial Conference Board, an association of large employers, makes studies and reports on many phases of the material of this chapter. Their address is New York City.

5. The American Federation of Labor publishes information on wages, cost of living, and the problems of the workers. Their address is Federation Building, Washington, D. C.

CHAPTER XIII

CAUSES AND PREVENTION OF DESTITUTION

We have heretofore been discussing and analyzing the normal process of social and economic life. We have traced the growth of population, the migration of peoples, occupations, education for social efficiency, health, distribution of income, and similar social facts, and also the business life of the community as exhibited in the system of transportation and communication, trade, and commerce. We have treated the normal life of the individual in his struggles for a living, and for economic and social improvement. We shall now discuss the breakdown of the normal processes through which the individual falls into lower standards of living and into dependency, pauperism, and crime.

If we could review an army of 100,000 infants one year of age and then repeat the review regularly every ten years until old age, we would have an accurate view of the causes which force many to fall into distress and destitution. At the first ten-year review we would find already the seeds of deterioration in many of the children. Some show mental deficiencies, others physical weaknesses, which will handicap them in the race for a livelihood. Some have become crippled by accident and disease; some are already out of school without the slightest equipment for life. Some have lost their parents and are already dependent upon the charity of individuals, benevolent associations, the church, or the state. Some through neglect have developed tend-

encies which, if unchecked, will lead to delinquency and crime.

The second review at twenty years of age will see all of the foregoing effects accentuated among those who have survived. The young men and women who are handicapped by accident, disease, or mental deficiency fall out of the race one by one as the strain of life's work begins to tell on them. Those who have not been prepared by education or vocational training for effective work begin to find that they cannot earn more than a bare existence and often not even that. Many are employed at a wage insufficient to provide the necessaries of life unless they are fortunate enough to have parents or relations upon whom they can lean. All such are weak to withstand the ravages of disease, which in turn increase their hazards. A few who have shown tendencies toward delinquency have succumbed and are in jails, reformatories, or penitentiaries. Others have been before the juvenile court and in the reform schools. The stream of mentally deficient people has already set toward the institutions for feebleminded, epileptic, and insane.

At thirty and forty, other hazards of life are added. The great majority are married and have families to support. Sickness and accident become serious hazards because the workers cannot lose time from work for any great length without a resultant handicap. The loss of work through periods of business depression looms up as an awful spectacle. To be out of work for weeks or months is to drive many into some form of dependency, if not into actual pauperism. The loss of savings through bad investments brings a few who have been able to escape the other calamities into economic distress. In the meantime all of the other disasters of life are working their evil way. Accidents

and disease have added hundreds to the list of those permanently disabled, partially or totally. Crime has taken its further toll, and vice has sapped the physical and moral fiber of others.

At fifty, another specter has come into the life of the survivors. It becomes harder to hold a regular job and when lost it is extremely difficult to secure another. Casual employment with all its uncertainties looms as their lot in life.

Finally, at sixty, we find our 100,000 reduced to about half their original number. A goodly portion have accumulated some property. Many have children upon whom they may depend. A small number are active in business and professions. A considerable number of skilled men are still found in the trades, but the bulk of the unskilled who have not accumulated property lead a precarious life in casual labor. Physical and mental disability have left many wrecks. Vice and crime have destroyed the lives of a considerable number. Charity is called upon by increasing numbers for help. The old folks' homes begin to appear as a refuge to a few.

Those who are fortunate enough to have accumulated a little property also have their problems at sixty or sixty-five. Unless their property yields income enough each year to support them they are in danger of using up the principal before they die. They must plan to make what they have last throughout their remaining life even if it is prolonged for thirty years or more, lest they find themselves in extreme age without means of support.

The picture of life which has been set forth in these ten-year reviews is somewhat gloomy and would be disheartening if we did not set forth the social efforts already effectively under way to counteract the calamities outlined. This

will be done after a further analysis of the main causes of social and economic breakdown in families and individuals.

Blindness

The Federal Census has enumerated the blind since 1830 with the following results.

Table 125. — The Blind in the United States: 1830–1920

Year	Number of blind	Males	Females
1830	5,444		
1840	6,932		
1850	9,764	5,455	4,339
1860	12,658	7,227	5,431
1870	20,320	11,343	8,977
1880	48,928	26,748	22,180
1890	50,568	28,080	22,488
1900	64,763	37,054	27,709
1910	57,272	32,443	24,829
1920	52,567	30,160	22,407

It is stated by the Census Bureau that for various causes the censuses before 1880 and that of 1900 were inaccurate. In the latter the census takers were given five cents for each blind person, and excessive numbers were reported.

At each census the number of males has been greater than that of females, beyond the proportion in the general population. This difference is undoubtedly due to the greater risks of accidents in employments in which men engage.

Examples

1. What was the number of blind per hundred thousand of the total population at each census?
2. For every hundred blind females find the number of blind males.

3. What is the apparent trend in the extent of blindness? What are some of the causes of this trend?

4. Secure data on the number of blind in your state, county, and city.

5. Why are there more blind males on the average than blind females?

Sickness

Sickness is the main cause of destitution. At least 35 to 50 per cent of destitution in this country results from this cause. The sickness of the wage earner is always a serious economic matter in a family, but when prolonged it becomes a calamity.

It has been calculated by many authorities that there is an average of 9 days of sickness for each worker every year and that workers lose on the average about 7½ days from work. If evenly distributed at that rate, sickness would not be a great burden. Unfortunately it is not evenly distributed. Some do not have any sickness at all in a year, while some are sick for long periods. In a study covering about 663,000 workers and 131,000 cases of sickness, the Ohio Health and Old Age Insurance Commission found that 20 per cent of the workers were sick during one year. Thus 80 per cent escape each year. Of those that were sick for more than 7 days nearly 65 per cent suffered less than 30 days; 19 per cent were sick from 4 to 8 weeks; 7 per cent, from 8 to 12 weeks; 6 per cent, from 12 to 26 weeks; and 3 per cent, for more than 6 months.

It is evident from these figures that the burden of sickness falls upon the few who are sick for long periods. Among 100,000 able-bodied workers 20,000 will be sick in any ordinary year, but of these 65 per cent, or 13,000, will be disabled for not over one month. The other 7000 are

seriously handicapped, and the 1800 who are sick for more than 3 months are likely to be driven to serious straits if they are the sole breadwinners of families.

Examples

1. How many wage earners are there in your city? What is the total loss from sickness at the rates given above?
2. What is the total wage loss to the workers from sickness at the prevailing average wages?
3. What is the wage loss at prevailing wages among 100,000 workers who suffer the varying periods of sickness indicated above?

Accidents

We do not know how many serious accidents take place every year in this country, because all accidents are not reported. However, factories, railroads, mines, and similar industrial establishments are required by law to make reports of all accidents, and from these we get a basis for an estimate of the extent of accidents. It is estimated that fully 35,000 people are killed in various industries and 2,000,000 seriously injured every year. The U. S. Bureau of Labor Statistics makes an annual summary of accidents under the workmen's compensation laws and in 1922 found that over 1,300,000 accidents were reported. Since many industries including agriculture do not report accidents, the number given is not the total. The railroads are required to report accidents to the Interstate Commerce Commission, and from the report of the latter we learn that 2131 employees were killed and 152,873 injured in 1923; 167 passengers were killed and 7245 injured; and 2268 trespassers were killed and 6314 were injured. Coal mines reported 1971 men killed in mine operations in 1922, or nearly 4 out of every 1000 men employed.

The reports of a typical state industrial commission — that of Massachusetts — show that 306 persons were killed and 139,611 injured in 1922 in the industries of that state, for which compensation of over $6,000,000 was paid.

Examples

1. What was the rate of death from accidents in factories in Massachusetts for each 1000 of the population of that state? Of injuries?
2. What was the cost per ton of coal mined, measured in the deaths of miners? Measured in injuries of miners?
3. How many passengers were carried for each passenger killed? Injured?

Mental Deficiencies

The number of people cared for in institutions for those suffering from mental diseases has been increasing in number and also in the rate per hundred thousand. According to figures compiled by the National Committee on Mental Hygiene on June 1, 1890, there were 106,485 persons in institutions for mental diseases, or 170 per thousand of population; in 1910 there were 187,791, or 204 per thousand, and in 1920 there were 232,680, or 220 per thousand.

These figures have been quoted as proof of an increase in insanity. Probably they do not mean that, but rather that more facilities are now provided than formerly, and more are in institutions who ought to be there. The figures given for each state in 1920 vary from 83 per hundred thousand in Arkansas to 373 in Massachusetts and 763 in the District of Columbia. These figures do not mean that there is four and a half times as much insanity in Massachusetts or nine times as much in the District of Columbia as in Arkansas. They mean rather that ampler provision for care is made in Massachusetts and in the District of

Columbia than in Arkansas. The table of state rates is not included here because, for the reason given, comparison would be misleading.

Crime

It is frequently declared that crime is increasing. Crime waves are reported sensationally from time to time, and it is probably the general belief that crimes are more numerous. It is impossible to get exact measurements to determine whether we are going forward or backward in this respect. Statistics of the number of crimes are not reliable for the reason that reports are inaccurate and also because the actions that constitute crimes are not the same year after year. The more complex the society the more laws and regulations there are which may be violated. During the last few years hundreds of new types of law-breaking have been developed due to new regulations, such as those controlling automobile traffic or the laws prohibiting the sale or distribution of liquor. Comparison between 1890 and 1920 would not be true because there were many acts of 1920 for which people might be arrested that were not crimes in 1890. Statistics of arrests and convictions are also misleading, for the number of arrests and convictions may depend quite largely upon the activity and efficiency of the police and prosecutors. Comparisons between states and cities are also misleading for the same reasons.

The only fair comparisons which we may make is to take the more serious crimes punishable by imprisonment in the penitentiary or reformatory and see whether there has been an increase or decrease in the number in proportion to population. The total number of prisoners in federal

prisons was reported in 1917 as 3018 and in 1922 as 5540. This increase was largely due to the expansion of federal law during the period which made many new crimes under federal law, such as violations of the prohibition law. There were reported in 104 state institutions in 1922 a total of 78,673 prisoners, and in 1917 in 94 prisons a total of 71,442 prisoners. In view of the increased population and the new regulatory laws which greatly increased the possibilities of lawbreaking, the increase is not an indication that serious crimes and criminal tendencies are increasing.

Examples

1. Find the number of prisoners in state's prisons and reformatories in your state.

2. How many people were in prison out of every 100,000 in 1917? In 1922?

Family Breakdown

The stability of the family is necessary for the proper protection and training of children. When the family breaks up for any reason, the children are the greatest sufferers; they are deprived of their natural home life, the guidance and care of parents, the opportunities for training for life's work, and are exposed to greater moral dangers and risks. Society is interested therefore in strengthening family life for its own present and future good.

Family breakdown may result from death or disability of the father or mother, from the incompetency or immorality of parents, or from the separation or divorce of the parents. Society is providing increasingly for the care of children left helpless through the death of parents, particularly the death of the father. Families are being kept

together through the aid of charities and mothers' pension systems, which provide the means of living. Society is protecting the rights of children in families where parents are neglectful, or immoral, through juvenile courts and similar agencies that intervene to force parents to do their duty properly toward their children. When separation and divorce are finally resorted to, society still safeguards the rights of the children as far as possible by compelling their support, safeguarding their property rights, if any, and providing for their guardianship.

We do not have complete statistics of the families destroyed by death or disability of parents. The number of families sustained by charitable funds or by mothers' pension is, however, very large and tends to increase as the value of family rehabilitation and maintenance comes to be seen more clearly. The number of parents who are compelled by juvenile courts to fulfill their parental obligations is also very large.

The number of completely dismembered families through divorce is increasing to such an extent as to cause alarm for the future welfare of the family. We have already seen the figures of divorced people at each census. The statistics of marriages and divorces have been gathered by the U. S. Census Bureau and are given for different years in Tables 126 and 127.

The number of divorces by states shows where easy divorce laws permit the break-up of families. Table 126 which follows should be studied with care.

Since many people go to another state, gain a residence, and get a divorce, it follows that the figures in this table do not represent the actual number of bona fide residents in each state who get divorces.

TABLE 126. — MARRIAGES AND DIVORCES IN THE UNITED STATES

STATE	MARRIAGES		DIVORCES		MARRIAGES		DIVORCES	
	1922	1916	1922	1916	1925	1927	1925	1927
Alabama	25,295	25,453	2,637	2,265				
Arizona	3,192	3,634	680	613				
Arkansas	26,740	24,584	4,038	3,747				
California	47,477	30,996	9,227	5,573				
Colorado	11,456	9,071	2,073	1,061				
Connecticut	12,095	15,168	1,030	961				
Delaware	1,451	2,038	224	210				
Dist. of Col.	5,760	4,293	161	47				
Florida	14,978	11,654	2,207	1,334				
Georgia	35,635	32,268	1,833	1,399				
Idaho	4,138	3,840	845	797				
Illinois	75,208	68,529	10,995	8,546				
Indiana	37,692	33,521	7,005	5,636				
Iowa	22,745	22,843	3,815	3,309				
Kansas	19,705	18,162	3,436	2,618				
Kentucky	26,922	23,189	4,042	2,981				
Louisiana	21,665	18,042	1,731	1,343				
Maine	6,649	6,576	1,139	702				
Maryland	22,928	20,397	1,426	1,003				
Massachusetts	32,683	34,386	3,208	2,336				
Michigan	43,561	40,112	7,572	5,327				
Minnesota	24,248	22,800	2,588	1,956				
Mississippi	25,247	23,927	2,310	1,893				
Missouri	39,598	36,827	8,344	5,791				
Montana	5,228	8,108	1,207	1,484				
Nebraska	12,416	12,786	2,283	1,675				
Nevada	935	1,001	1,026	648				
New Hampshire	4,505	4,491	600	698				
New Jersey	27,114	31,169	2,082	1,169				
New Mexico	4,101	3,353	473	387				
New York	97,468	97,454	4,238	3,269				
North Carolina	22,191	21,337	1,317	668				
North Dakota	3,822	4,896	336	478				
Ohio	53,206	52,592	10,182	7,608				
Oklahoma	26,755	20,049	5,564	3,693				
Oregon	6,538	5,302	2,522	2,100				
Pennsylvania	70,289	72,053	6,892	4,980				
Rhode Island	5,669	5,699	819	623				
South Carolina	17,624							
South Dakota	5,505	5,581	560	585				
Tennessee	32,549	26,960	3,908	2,800				
Texas	61,233	54,103	12,399	8,504				
Utah	5,233	5,036	604	661				
Vermont	3,035	5,279	369	419				
Virginia	23,017	21,329	2,413	1,886				
Washington	16,359	13,829	2,182	3,448				
West Virginia	17,024	16,033	1,467	789				
Wisconsin	17,277	18,343	2,033	1,721				
Wyoming	1,998	1,591	512	296				
U. S. Total	1,126,418	1,070,684	148,554	112,037				

TABLE 127. — MARRIAGES AND DIVORCES: 1887–1922

YEAR	NUMBER OF MARRIAGES	NUMBER OF DIVORCES
1887	483,069	27,919
1895	598,855	40,387
1900	685,284	55,751
1906	853,290	72,062
1916	1,070,684	112,037
1922	1,126,418	148,554
1925		
1927		

This table discloses a steady increase in the number of divorces in proportion to marriages for the period covered.

Examples

1. How many marriages per thousand people were there in the United States in 1900? In 1922?

2. How many divorces per thousand people were there in the United States in 1900? In 1922?

3. How many marriages and divorces per thousand people were there in each of the states in 1922?

4. Which state has the highest and lowest rate per thousand of marriages and divorces?

COMMERCIAL FAILURE

The calamities of life which destroy economic independence are not all personal such as described above. Business failures due to many causes add greatly to the instability of the individual and of society; they add to the number of persons who become dependent, especially in old age. The fortunes of people invested in enterprises are sometimes swept away by events over which they have no control. The amount of loss each year, while large in the aggregate, is small in comparison with the total business

assets of the country. The calamity in such failures is that they fall heavily upon a few, sometimes sweeping away all they possess.

TABLE 128. — COMMERCIAL FAILURES IN THE UNITED STATES: 1900–1921 [1]

Year	Number	Assets	Liabilities
	ASSETS AND LIABILITIES OF FAILED CONCERNS		
1900	10,774	$78,079,555	$138,495,673
1901	11,002	55,455,940	113,092,376
1902	11,615	58,729,557	117,476,769
1903	12,069	90,013,981	155,444,185
1904	12,199	84,438,076	144,202,311
1905	11,520	57,826,090	102,676,172
1906	10,682	66,610,322	119,201,515
1907	11,725	138,535,645	197,385,225
1908	15,690	146,199,325	222,315,684
1909	12,924	102,773,007	154,603,465
1910	12,652	136,538,168	201,757,097
1911	13,441	124,516,544	191,061,665
1912	15,452	136,538,168	203,117,391
1913	16,037	174,688,151	272,672,288
1914	18,280	265,293,046	357,908,859
1915	22,156	183,453,383	302,286,148
1916	16,993	113,599,026	196,212,256
1917	13,855	103,464,805	182,441,371
1918	9,982	101,637,798	163,019,979
1919	6,451	67,037,843	113,291,237
1920	8,881	195,504,114	295,121,805
1921	19,651	409,038,316	627,401,883
1922			
1923			
1924			
1925			
1926			
1927			

[1] Records of business failures are made by the R. G. Dun and Co., and are issued annually. The figures may be found in such sources as the *World Almanac*, the Chicago *Daily News Almanac*, and the *Statistical Abstract of the United States*.

Most business failures are not a total loss, as there are generally some assets to be divided. Thus while the total liabilities of all concerns that failed in 1921 were $627,401,883, there were offsetting assets to the extent of $409,038,316, leaving a net loss of $218,363,567.

The extent to which losses have occurred during the years 1900 to 1921 is given in Table 128. It may be noted historically in this table that periods of depression took place in 1907–1908, 1914–1915, and 1920–1921.

The causes for failure indicate the risks of economic life over many of which the individual has no control.

TABLE 129. — WHY BUSINESSES FAIL

FAILURE DUE TO	NUMBER		ASSETS		LIABILITIES	
	1922	1921	1922	1921	1922	1921
Incompetence	7,666	6,404	$72,631,096	$103,548,671	$140,241,850	$167,975,466
Inexperience	1,062	1,142	6,808,250	11,391,871	12,244,659	21,851,478
Lack of capital	6,912	5,855	80,848,584	77,166,433	158,575,479	165,536,601
Unwise credits	292	230	5,791,966	22,938,682	9,570,876	29,329,791
Failures of others	278	226	7,856,990	8,183,145	16,139,150	13,957,791
Extravagance	148	82	1,589,500	1,138,640	3,526,794	2,388,411
Neglect	236	257	4,376,378	1,379,815	6,562,221	3,014,239
Competition	250	183	5,354,535	1,171,511	8,092,894	2,082,472
Specific conditions	4,686	4,638	157,311,140	205,056,079	241,071,706	317,863,633
Speculation	55	66	6,362,127	5,413,682	11,636,992	8,593,432
Fraud	830	931	16,687,688	9,210,059	42,185,759	23,184,371

Examples

1. What was the average loss per failure in 1921? In other selected years?

2. What was the proportion of assets to liabilities in 1921? In other selected years?

3. What was the total loss for the years 1912–1921?

4. What percentage of losses was due to the fault of the individual as indicated by the causes of failure?

Stabilizing Social Conditions

It should be clear that the best way to attack the problems of dependency, pauperism, crime, and social breakdown is to attack the causes. If sickness, accidents, mental defects, unemployment, unprovided old age, and family disintegration are the principal causes of social disaster, then society should eradicate these causes and thereby stop the downward flow of humanity.

While the picture outlined above is depressing, there is no sound reason to despair, because improvement can be seen on every hand. We have already studied the improvement in health as disclosed by the death rates. We have seen the death rate reduced 40 per cent in the last forty years. There are fully 850,000 fewer deaths each year than there would be if the conditions of forty years ago prevailed. Medical science and community action have conquered typhoid fever, smallpox, and diphtheria, and are fast conquering tuberculosis. We may reasonably expect other advances and the conquering of other diseases.

The economic consequences of sickness are also less severe than formerly, thanks to the provision of wise laws and philanthropies. Medical and hospital care is rapidly extending and improving. Nursing care has been carried into the homes through visiting-nurse associations and public health nurses. Public provision is made for the care of the tuberculous and the mental defectives. Public health departments are providing various preventive means, such as anti-toxins against contagious diseases. Industries are providing for payment of a part of the wages of sick employees. Mutual benefit and fraternal societies are popularizing sickness insurance whereby payments are made during disability. The states are considering plans for sick-

ness insurance similar to that used in accidents. Through the payment of mothers' pensions, provision is made in nearly every state for caring for the mothers of children rendered helpless by the death of the breadwinner. In 1923, in Cook County, Illinois (Chicago), 1453 families with 4469 children, and in New York City 13,140 families with 40,499 children, were thus provided for. The number of families thus kept together throughout the country would exceed 50,000 and the number is increasing steadily.

The greatest of these advances for human betterment have been made from 1910 to 1920 and there is no reason for thinking that the advance will not continue.

Example

1. Find out the provisions of your Mothers' Pension Law, and inquire as to the number of families receiving pensions.

Workmen's Insurance

Workmen's insurance against accidents in industry is now provided by law in forty-three states. By the provisions of these laws, employees are insured against loss of wages and the cost of medical care. When a worker is disabled a part of his wages is paid during disability and the cost of medical and hospital care is provided for. The worker is thus helped over the period of stress and is not driven to seek charitable aid as he was compelled often to do before the days of workmen's compensation laws. The dependents of workers killed in industry are likewise provided against dependency by this plan of insurance. The injured workers are also being refitted physically and by vocational education so that they may become again productive workers. The results thus far indicate that when adequate provision

is made in all of the states there will be few who are driven into dependency by accidents that happen in the course of employment.

Examples

1. Secure from your Secretary of State a copy of the state's Workmen's Compensation Law.
2. Obtain a copy of the annual report of the Industrial Commission or Workmen's Compensation Commission of your state.
3. How many accidents are reported in the report?
4. Make inquiry in your community as to workers who have been paid compensation under the Compensation Law.
5. Examine carefully the annual report of the Industrial or Workmen's Compensation Commission to learn of the work done.

Health Insurance

The application of the principles of insurance to the sickness problem would undoubtedly save many of those who are now driven into poverty by physical disability. If means of living are provided during sickness from an insurance fund, the unfortunate victims are tided over the economic crises and saved from the necessity of seeking charitable aid. Private enterprise has created means of insurance but as yet only a small portion of the people voluntarily make provisions for securing its protection. European countries have developed plans for social health insurance and American states have studied the subject preparatory to action when the right way is indicated.

Example

1. If a thousand workers earning four dollars a day lose seven days a year on the average, how much money would be necessary annually in an insurance fund to pay them two-thirds of their losses?

Old-Age Insurance

The prospect of living beyond 65 is shown by the U. S. Census Bureau's life tables. According to the Census of 1910, out of every 100 persons born alive, 52 will reach the age of 60; 45, the age of 65; and 36, the age of 70. A person who has reached the age of 65 may expect to live twelve years and at 70 may expect to live nine and one-half years. The actual length of life for each is uncertain. Out of a group at 65 some will live perhaps thirty years while others may not survive one year. Those who have some small means find it difficult to gauge their expenditures to make what they have last them an uncertain length of years.

The improvement in health has increased the length of life and consequently the number of aged persons. The aged over 65 constituted 3.8 per cent of the population in 1890; 4.2 per cent in 1900; 4.3 per cent in 1910, and 4.7 per cent in 1920. At the same time the percentage of persons past 45 employed in gainful occupations has steadily decreased. In many occupations the decrease is very rapid after 45 years of age. The workers thus eliminated are usually compelled to live on precarious employment the rest of their lives.

The care of the aged workers has pressed itself as a problem upon the conscience of our people and we are just entering the era of fulfillment of our obligation to those who have grown old in service and are no longer able to continue at work and to those who, through the vicissitudes of life, have not accumulated sufficient property for their support. In the year 1923, three states, — Montana, Nevada, and Pennsylvania[1] — passed old-age pension laws

[1] The Pennsylvania law was later declared unconstitutional by the state Supreme Court because of conflict with a provision of the state constitution.

providing for pensions under certain conditions to persons over 70 years of age. This method of caring for the aged without pauperizing them seems likely to spread over the country. At the same time private industries and governments are providing for pensioning aged employees. The Federal Government has a complete system of old-age retirement insurance. Policemen, firemen, and teachers are pensioned in many states and cities. Some of our largest institutions, including several railroad systems, provide pensions for aged workers. The problem of old-age dependency seems likely to be satisfactorily solved within this generation.

Examples

1. What would be the cost of old-age pensions paid at the rate of five dollars per week to all persons over 70 in the United States? In your state?

2. In several countries about one-third of those eligible by age apply for pensions. If a similar proportion applied in this country, what would be the cost of a pension system at five dollars a week for people over 65?

Unemployment

Unemployment is still a specter to the worker. In times of business depression large numbers of men are out of employment. The number has reached as high as 5,000,000 in the United States. Even in good times fully a million and a half cannot find work, due to causes such as strikes, lack of training, and unfitness for the work available. Unemployment for any great length of time is a calamity to wage earners. Savings are used up, hardships follow, and many are compelled to seek charitable aid.

The fluctuations of employment are measured accurately in some industries such as manufacturing. The number employed varies greatly from year to year and even within

a given year. The following table shows the average number employed at the five last censuses of manufactures.

TABLE 130. — AVERAGE NUMBER EMPLOYED IN MANUFACTURING

YEAR	AVERAGE NUMBER EMPLOYED
1904	5,468,383
1909	6,615,046
1914	7,063,247
1919	9,096,372
1921	6,946,570
1923	
1925	
1927	

From this table we learn that more than two million people who were employed in 1919 had to find other means of livelihood in 1921 and, in fact, there were fewer people employed on the average in 1921 than in 1914.

The range of employment within the year also discloses the uncertainties for the workers. The highest and lowest number employed in different months in the years 1909, 1914, 1919, and 1921 were as follows:

TABLE 131. — MAXIMUM AND MINIMUM EMPLOYMENT IN MANUFACTURES

YEAR	AVERAGE NUMBER EMPLOYED	MAXIMUM NUMBER	MINIMUM NUMBER
1921	6,947,650	Nov. 7,190,227	July 6,756,680
1919	9,096,372	Dec. 9,663,170	April 8,666,549
1914	7,036,247	Mar. 7,242,662	Dec. 6,640,194
1909	6,615,046	Nov. 7,006,853	Jan. 6,210,063
1923			
1925			
1927			

It will be seen that in 1921 over 440,000 workers employed in November were not employed the previous July. In 1919 nearly 1,000,000 workers were idle in April who were employed in December.

These figures show how difficult it is for workers to keep steady employment in one of the principal occupations in which men engage. Agricultural work is even more fluctuating. Mining and transportation also vary greatly in activity and in number employed.

Progress in solving this problem has been slow because it requires foresightedness. In good times provision must be made for the bad times. Emergency measures hastily organized when depression comes will not generally do more than slightly lessen the evils. Fortunately the government and business are coöperating to find a way of stabilizing operations so that there will be a more even flow of work throughout the year and for periods of years. By reserving extensive improvements to be made when ordinary business slackens it is possible to keep employment more stable. Thorough organization in this respect will doubtless reduce the evil. Insurance plans have also been outlined to provide for the insurance of workers, as in England, against the calamity of not being able to find work. No law has at this time been enacted in any state for unemployment insurance, but the experiment seems likely to be tried in one or more states at an early date.

Examples

1. Find the difference between the maximum and minimum employed in manufacturing at each census period.

2. In the *Abstract of the Fourteenth Census* or in the *Statistical Abstract of the United States* find the maximum and minimum number of persons employed in your own state in manufacturing.

3. From the same source determine the variation of employment in different kinds of manufacturing plants. Which show the greatest seasonal variations and which the least? Account for the variations.

4. What are the effects of unsteadiness of employment upon workers?

5. The U. S. Bureau of Labor Statistics collects regularly the statistics of employment and unemployment in the main industries and from it the trend may be obtained at any time.

Other Social Provisions

Provision is made for the care of the blind, deaf, and feeble-minded in nearly all parts of the country. In 1918, there were 62 public schools for the blind, with 5386 pupils; 154 schools for the deaf, with 14,403 pupils; 205 schools for the feeble-minded, with 50,084 pupils; and 135 reform schools for youth, with 63,762 students. Comparisons of increase from year to year or of state with state are not worth while, because the figures do not reflect the number of people in those groups but rather the generosity of the different states in providing for the care and education of these unfortunates.

Those who fall into actual want for the necessaries of life are being cared for increasingly by outdoor relief from the public and by organized charities conducted by religious and other benevolent organizations. The Associated Charities has come to be an important factor in the organizing of relief in most of our communities.

All of the agencies for prevention and relief outlined in this chapter have materially affected the trend of the dependent class toward the poorhouse. That institution, which is found in all states, is the ultimate resort of those who are in utter destitution. So marked has been the development of other forms of care, however, that the

poorhouse population decreased from 84,198 in 1910 to 78,090 in 1923, thus giving proof of the value of organized social work. One by one different groups are being taken out of the poorhouses for care in homes or in special institutions.

Sources for Research

1. The U. S. Bureau of Labor Statistics publishes monthly a review of many of the topics in this chapter in the *Monthly Labor Review*, such as accidents, unemployment, and workmen's compensation for industrial accidents.

2. The *Statistical Abstract of the United States* gives the latest statistics of many of the subjects treated here.

3. The U. S. Census Bureau publishes information on defective classes and benevolent institutions.

4. The *World Almanac* and Chicago *Daily News Almanac* are ready references on the materials of this chapter.

5. A special census of prisoners for 1910 and 1923 was published by the U. S. Census Bureau in 1925. It contains very important comparative data on crime.

PART IV

COMMUNITY WORK

CHAPTER XIV

COMMUNITY ORGANIZATION AND WORK

The people's activities are carried on by means of individual, associated, and community effort. The individual does many things by himself. He associates with others through partnerships and corporations to do other things beyond his own power. He joins with others to form cooperative societies to do certain things for mutual advantage. The workers organize with their fellows to form labor unions and mutual benefit societies for their protection and advancement. Employers likewise form associations for unified action. Great groups of people seeking one object or another form fraternal societies, clubs, and lodges. Millions are united in churches to maintain divine worship and conduct related work according to their religious beliefs.

All of these individual and associated efforts ramify through society and by means of them a great part of the work of the world and the aspirations of men are achieved. But there are other functions which require the united efforts and support of all. These the people perform through the more comprehensive organization of the community. These community functions will be the subject of this chapter.

Community Organization

The people maintain community functions for the common welfare; the public educational systems, highways,

public charitable institutions, parks and playgrounds, police, fire, and health departments, armies and navies are provided by the people for their own benefit, and the cost is borne from the common purse. Government is the agency which the people organize and direct for the carrying on of their community enterprises for common welfare.

In the United States the community work is organized through local, state, and national governments. Each of these governments is given certain of the people's functions to carry on. Local governments, consisting of townships, counties, villages, towns, and cities, school districts and similar local districts, provide for most of the local needs. State governments provide for the larger needs, which cannot be met locally, and make the laws which govern local as well as state matters. The national government is given certain definite functions which call for national action.

We would get a clearer idea of the relation of community activities to those of individuals by the aid of two circles — a large circle comprehending all of the activities of life and a small one, within the larger one, representing the activities carried on by the community. The large circle would include everything that the people do by themselves, or through associated or corporate effort, or through government. The small inner circle would include that portion of the whole which is performed by community organization in townships, counties, towns, cities, state, nation, and other units of government.

The circle representing the community activities would be only a small part of the area of the larger circle — probably not more than one-fifteenth or one-sixteenth thereof. It would be found that the community activities, measured

by the taxes raised are performed about as follows; one-half by the Federal Government, a little more than one quarter by the cities and towns, and about one-eighth each by the states and counties. Additional activities are carried on by townships and smaller districts.

It should be borne in mind always when considering community activities that they are not something apart from the people themselves but are, rather, that portion of the people's work which experience has shown can be performed best by coöperative effect through government. The things done by governmental agencies are in the main such as, without government, the people would have to perform by themselves.

The work which the people do for themselves through their government has been increasing steadily in response to increasing community needs and the recognition that those things which are essential for common service ought to be supplied by the community if the work can be advantageously done. One new function after another, therefore, has been taken up by public agencies, and all public activities have been greatly enlarged. At the same time private activities have also been enlarging greatly, and it is doubtful if the proportion of public activities has increased.

It will be our purpose in this chapter to measure these activities by the cost which is borne in conducting them and to analyze the source of the income by which each government, local, state, and national, is supported. The functions which each government performs will be greatly clarified by careful analysis of the purposes and extent of public income and expenditures. Government itself will be better understood by examining the purposes of its expenditures.

Expenditures of the Federal Government

The Federal Government has certain specified functions assigned by the Constitution, all other functions being retained by the states. The Federal Government has the duty of providing for national defense, international rela-

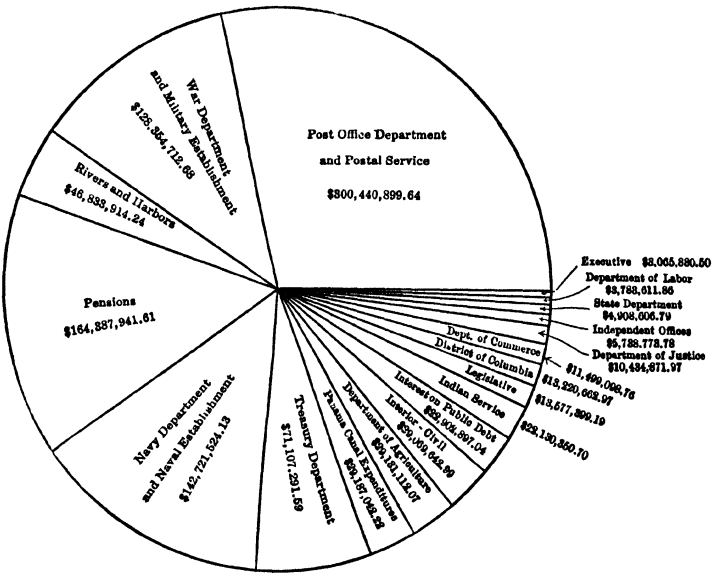


Figure 63. — Expenditures of the Federal Government: 1915

tions, currency, post office, public lands, regulating interstate commerce and its instruments, and controlling navigation. The Federal Government carries on numerous educational and promotional activities through the different departments. The principal expenditures are for the post office, most or all of which are repaid from earnings, War and Navy departments, pensions, rivers and harbors,

and, since the war, for interest on the public debt and for soldier rehabilitation.

Before the World War the expenditures were comparatively small, totaling in 1915 a little over one billion dollars including the postal expenditures. The expenditures for 1915 and 1922 are given in the next figure.

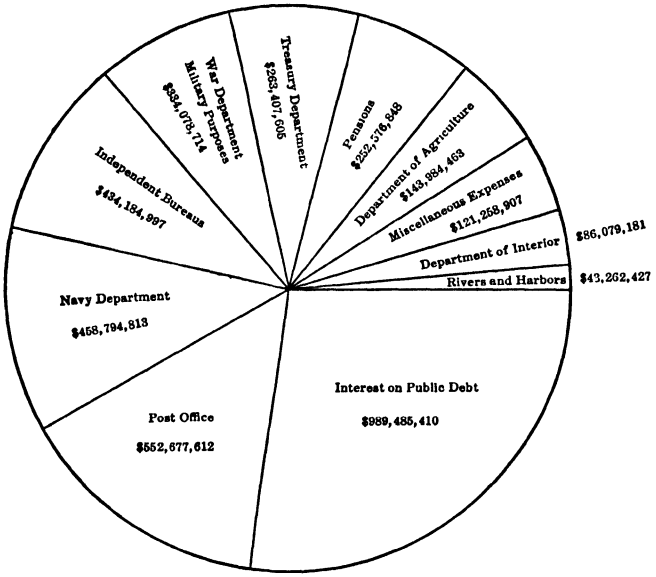


FIGURE 64. — EXPENDITURES OF FEDERAL GOVERNMENT: 1922

Examples

1. Estimate the population of the United States in 1915 and 1922, and find the per capita cost of the Federal Government and of each of the main items of expenditure.

2. How much of each dollar went for each purpose?

3. How much went for war purposes, including pensions, interest on war debt, and the cost of the army and navy? What percentage was this of the total?

4. Secure the latest budget from the U. S. Budget Bureau and make a chart similar to the above.

5. Are federal expenditures likely to increase or decrease?

Expenditures of the State Governments

The state governments carry on a greater number of activities of direct relation to the citizens, including highways, charities, education, and health protection. The

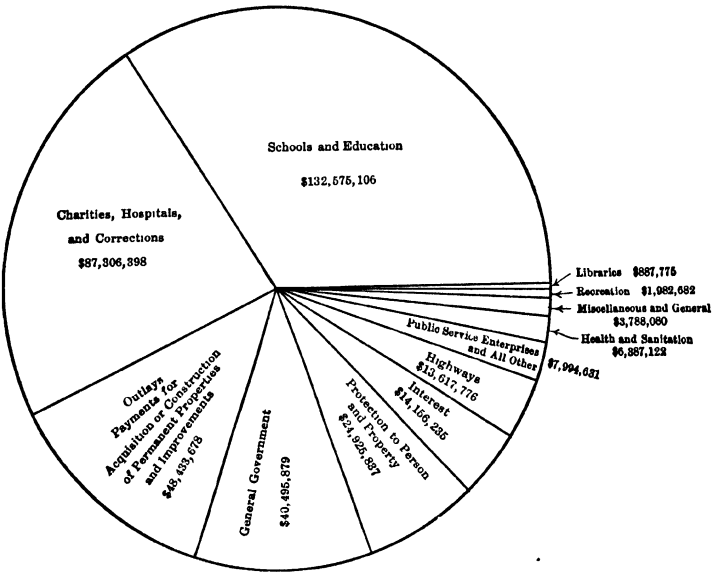


Figure 65. — Expenditures of States: 1913

expenditures for all of the states in 1913 were only 382 millions in round numbers. In 1919 state expenditures had increased to 640 millions and in 1922 to nearly 900 millions. The expenditures for 1913 and 1919 are given in the next charts.

Examples

1. Find the cost for all governmental expenses of your state in the last year. What is this amount per capita if it were assessed equally according to population?

2. Examine the diagram of government cost payments of the combined states. Make a similar diagram for your own state. What percentage of the total government cost payments of your state goes for recreation? Health and sanitation? Libraries? Miscellaneous

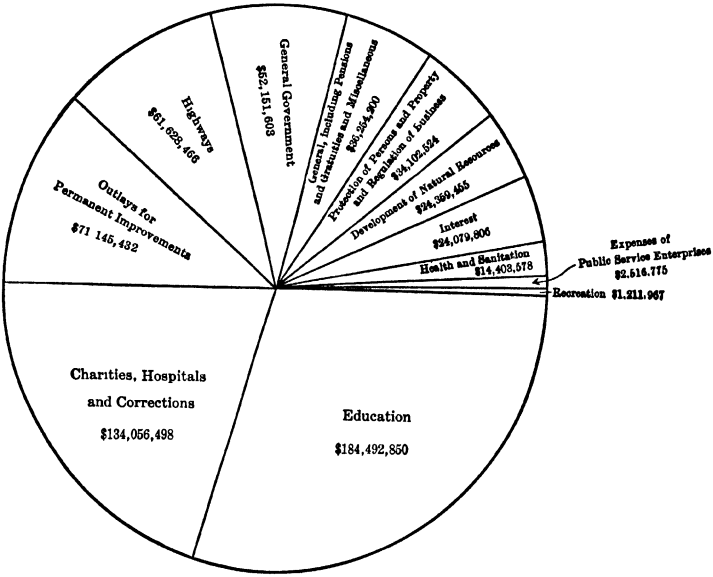


FIGURE 66. — EXPENDITURES OF STATES: 1919

and general? Public service enterprises and all others? Protection to person and property? Interest? Highways? General government? Education? Charities, hospitals, and corrections?

3. What is the per capita cost in your state for each of these outlays?

4. Is the order of expenditures in the diagram the same for your state as for the combined states? Note and discuss wherein they differ.

5. Examine the diagrams of government cost payments for all states. Beginning with the smallest expenditure compare the diagram with the diagram for your own state and note the variation in proportion of the different outlays.

6. Compare the expenditures in each group for the years 1913 and 1919. Which show marked changes?

7. Secure from the U. S. Census Bureau the latest compilation of state expenditures and make new diagrams comparable to the above.

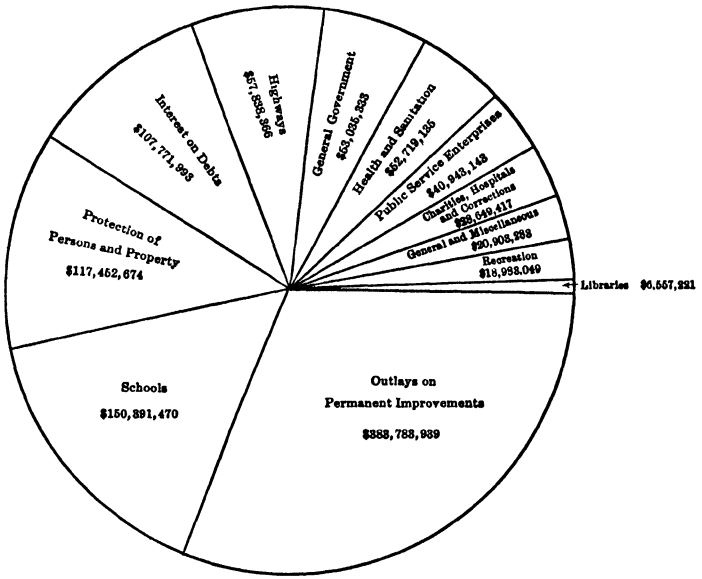


FIGURE 67. — EXPENDITURES OF CITIES OVER 30,000: 1913

EXPENDITURES OF CITIES

The cities provide for education, recreation, charities, police and fire protection, and certain public enterprises. In 1913 the expenditures for community services of all cities having a population of more than 30,000, and a total

population of 30,189,393, were $959,153,040. In 1921 the expenditures exceeded $1,400,000,000, as indicated in the next chart. The total population of cities over 30,000 in 1921 was 37,331,611.

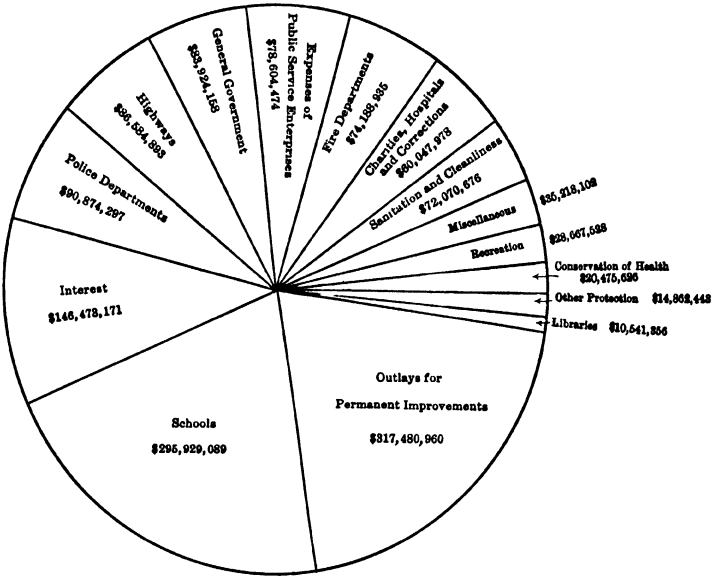


FIGURE 68. — EXPENDITURES OF CITIES OVER 30,000: 1921

Examples

1. Compare the per capita expenses of cities in 1912 and 1921.
2. Obtain from the comptroller, or other official, the disbursements for your own city, and make a chart similar to the one above.
3. What is the total expenditure for all purposes in your city?
4. What percentage is expended for each one of the general department?
5. Has your city an indebtedness? If so, how much is the annual interest on the indebtedness?

6. What is the per capita expenditures in your city for each general department?

7. How much of each dollar in revenue in your city is expended for each purpose?

8. Secure from the U. S. Census Bureau the latest compilation of expenditures of cities and make new diagrams similar to the above.

9. How much of each dollar of city expenditure goes for each purpose?

Expenditures of Counties

The expenditures of counties were compiled in 1913; at that time the total amount of money expended by the 2953 counties of the United States for all purposes was $385,181,760. The principal county expenses were for general government charities, outlays for permanent improvements, education, and highways. The amount and proportion of each is shown next. No similar compilation has been published for 1922, but the income of counties is shown for that year later in this chapter.

Examples

1. What was the percentage of each expenditure of the total county expenditure?

2. What part of each dollar paid to the county goes for each of the purposes of county government?

3. What were the expenditures of your own county for the last year?

4. Make a chart (as above) showing the distribution of the expenses of your county.

5. Show what part of each dollar went for each purpose.

6. Make a list of all the main functions which your county performs, together with the names of the departments which perform each function.

7. Secure from the U. S. Census Bureau the latest compilation of expenditures for counties and make a chart similar to that for 1913.

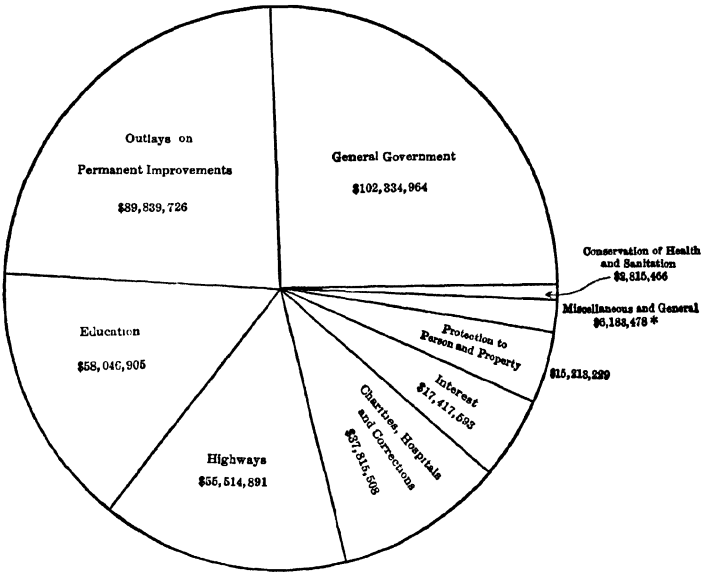


FIGURE 69. — EXPENDITURES OF COUNTIES: 1913

TOWNSHIP EXPENDITURES

Township government does not exist at all in many states, the functions thereof being performed by the counties. In New England the township, which is there called "town," is the principal local unit. In New York, Michigan, Wisconsin, Indiana, and Ohio, the township shares importance with the county, while in the South and West the county is the principal unit and the township either does not exist or is unimportant. The expenditures by township are mostly for roads, education, and care of the poor. Figures

have not been compiled for township expenditures throughout the country. In Indiana, where the township plays an important part, the total expenditures in 1913 were $13,758,863.

Examples

1. Secure the latest data on the expenditures of your township (if any).
2. What is the per capita expenditure of your township?
3. What are the items in township expenditures?

Public Income

Since the people maintain their government for the common welfare, the cost of activities such as education, highways, streets, charities, and the protection afforded by armies and navies, police, health, and fire departments are for the public welfare, and the cost must be met by the people.

The incomes of the various governments for ordinary operation at two periods were:

1912:	
Federal Government[1]	$667,038,000
State Governments	306,521,000
Incorporated Places over 2500	849,971,000
Counties	307,872,000
1922:	
Federal Government[1]	3,204,133,000
State Governments	867,552,000
Incorporated Places over 2500	1,532,435,000
Counties	745,000,000

Minor divisions of government, the township school district, drainage district, etc., collected many millions more for the services they perform, but the facts have not been

[1] Receipts from Postal Department not included.

assembled. The expenditure for the Federal Government will be more accurately reflected in later years, when the remaining abnormal expenses of the war have further diminished.

We are interested now in the sources of revenue from which each of these units of government derives its income.

The Sources of Public Income

General Property Tax: The oldest and most common form of taxation is the general property tax, which is a levy upon each dollar of property as valued and assessed for taxation purposes. The process of assessment consists in placing a value upon all personal property and real estate according to a fixed measure. Property is sometimes assessed at full value, sometimes at half or less. Differences in the basis of assessment between different communities or states must be taken into account for comparative purposes. When the amount of tax to be raised is determined, the total assessed valuation is divided by the total to be raised to get the rate of tax per dollar of property. Each taxpayer's tax is then figured by multiplying his assessed value by the tax rate. The main problem of the general property tax is to secure a fair assessment upon all property. It is possible to do so with real estate, but personal property being intangible and movable generally escapes. Unless all property is assessed, that part which is assessed carries an unfair burden. The states, cities, counties, and local districts all have the general property tax. The Federal Government is not permitted to levy such a tax.

Income Tax: The income tax is not a new form of taxation, but its practical application in the United States is comparatively new. It is a levy of a percentage of the

net income of persons and corporations. The net income is the amount left after certain deductions have been made, such as business expenditures, gifts to charities, and family exemptions. The rates may be uniform or progressive — that is, the rate may be the same for all incomes regardless of size or it may increase with the size of the income. The personal income taxes in this country generally begin at a normal rate, which is low on small incomes, and increase to a high rate on large incomes. Income taxes are levied by the Federal Government and by a few of the states.

Inheritance Tax: The inheritance tax is a levy upon the estates of deceased persons. Small estates are usually exempted, and the rate is progressive, being light upon the smaller estates and increasing to a high rate on the larger estates. The Federal Government and practically all of the states levy inheritance taxes.

Business Licenses: The business license tax is a direct tax levied upon the right to conduct certain businesses. It may be a flat rate for a business regardless of size or it may be graded according to some measure of the size of the business. Such taxes are levied by states, cities, and counties, and in war time by the Federal Government.

Vehicle Licenses: Such licenses have become of great importance since the advent of the automobile. They are levied at a flat rate for some vehicles and at a graded rate for others. Automobiles pay generally a rate proportioned to size as determined by such measures as the horse power. Vehicle licenses are usually levied by the states and cities.

Customs Duties: Customs duties are taxes upon the importation or exportation of goods from the country. The

duty may be specific, *i.e.* so much per article, or it may be ad valorem, *i.e.* according to value. The Federal Government alone has power to levy customs duties, and it is forbidden to levy an export duty.

Internal Revenue: This term includes all taxes upon tobacco, liquor, amusements, commercial paper, and similar objects, levied by the Federal Government.

Income from Productive Enterprises: The governments carry on an increasing number of activities which produce an income. The Post Office and the Panama Canal are notable examples in the federal service. Waterworks, gas and electric plants, etc., are conducted by cities, and the states have various enterprises including canals and some industrial works. Many of these activities produce a profit; some are run as nearly at cost as possible, while others are conducted as a public necessity at a loss, although the revenue may be considerable.

Special Assessments: Special assessments are levies against property which has been benefited by some public work, such as the opening or paving of a street, or the building of a sewer, or the creation of a public park. Such assessments are measured according to approximate values added by the improvement. Where the work benefits adjoining property only, the whole cost is assessed upon it; when the general public derives an advantage, a part may be borne from the general treasury. Cities levy special assessments for many purposes. The state and the counties also levy such assessments to some extent.

Federal Income

The Federal Government derives most of its income at this time from income taxes on individuals and corpora-

tions, customs, miscellaneous internal revenue, and postal receipts. The sources changed radically from those before the war, as shown by comparison of the following diagrams.

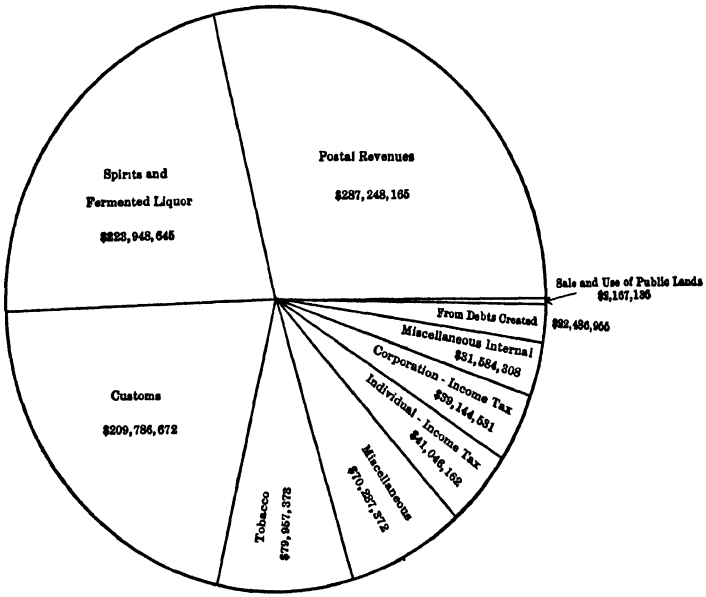


FIGURE 70. — FEDERAL RECEIPTS: 1915

Examples

1. What portion of the federal income came from each source in 1915 and 1922?

2. How many cents of every dollar of federal income came from each source?

3. Which sources of income increased most between 1915 and 1922?

4. Secure the latest table of federal income from the U. S. Budget Bureau and make charts similar to the above.

5. Since the postal revenues were used to pay the cost of the postal service they are not similar to the other sources, which are taxes. Make new charts for 1915 and 1922 with the postal revenues left out.

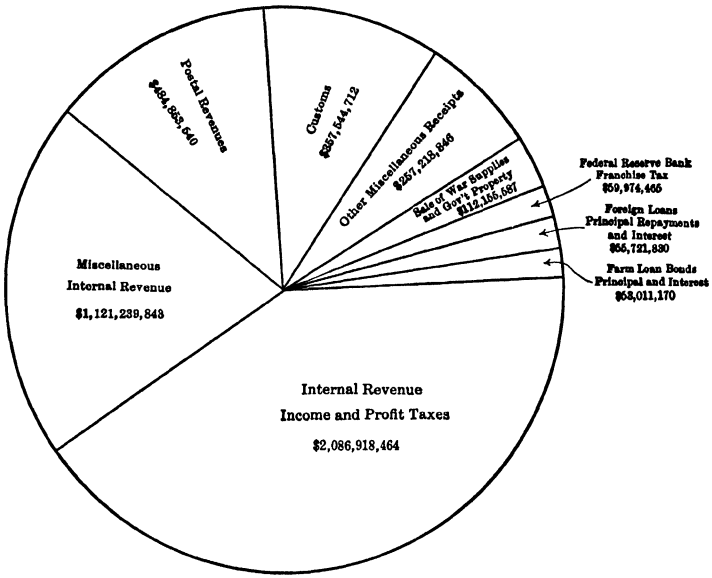


FIGURE 71. — FEDERAL RECEIPTS: 1922

STATE INCOME

The states receive the bulk of their income from direct taxes. The general property tax, which is a direct tax upon property, is one of the largest sources. Business taxes, automobile license taxes, inheritance taxes, and, in some states, an income tax constitute the principal sources. The system has changed considerably in the states also during the last ten years, and also varies considerably from state to state. In 1913 and 1919 the state revenue came as illustrated by the diagrams.

Examples

1. What portion of the state's revenue came from each source in 1913 and 1919?
2. What was the income of your state?

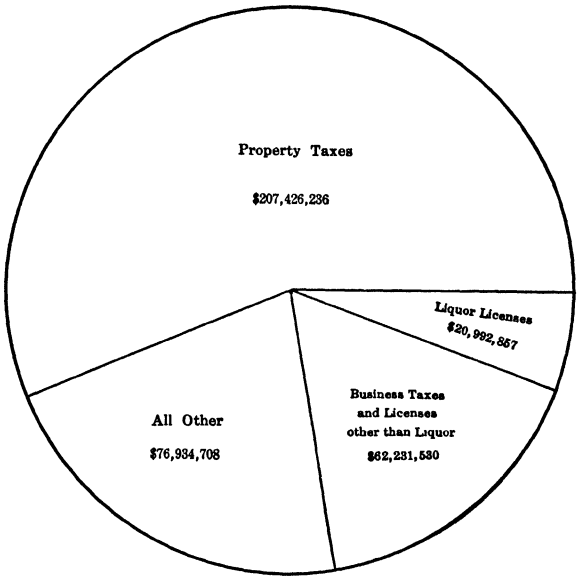


FIGURE 72. — STATE INCOME (ALL STATES): 1913

3. What were the sources of income in your state and what portion came from each?
4. What was the per capita income of all state governments in 1913 and 1919?
5. What is the per capita income of your state?
6. Note the difference between the sources of revenue for the states and for the Federal Government.
7. Secure from the U. S. Census Bureau the latest compilation of state income and make similar charts for the states as a whole and for your own state and compare the trend in the sources of state income since 1919.

8. What was the percentage of increase in total state income between 1913 and 1919 and what was the percentage of increase per capita?

9. From the latest compilation of state income statistics by the Census Bureau compile a table showing the per capita cost of state government in each state.

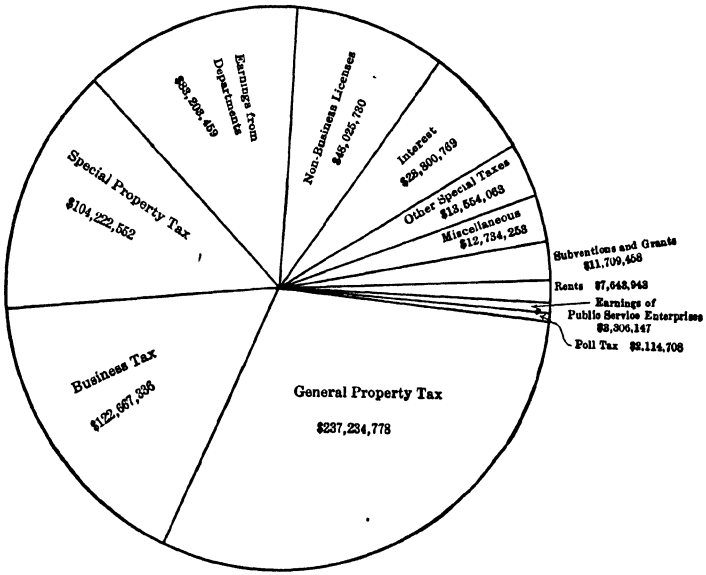


FIGURE 73. — STATE INCOME (ALL STATES): 1919

CITY INCOME

The sources of a city's receipts are mainly direct taxes.

The principal source of the income of cities is the general property tax which brought in somewhat more than half of the total revenue in 1912 and 1921. Next to this was the income from public service enterprises which represents the returns from municipally owned waterworks, electric light, power, gas, and other public utilities, a large part of which was paid out in operation. Special assessments constituted

the item of next greatest importance. This is a benefit assessment rather than a tax, the levy being for the improvements of streets, makings of sewers, etc., which add to the value of the property taxed.

Liquor licenses which constituted a considerable item in 1912, dropped out entirely in 1921, while business and license taxes increased greatly, due especially to the tax on automobiles.

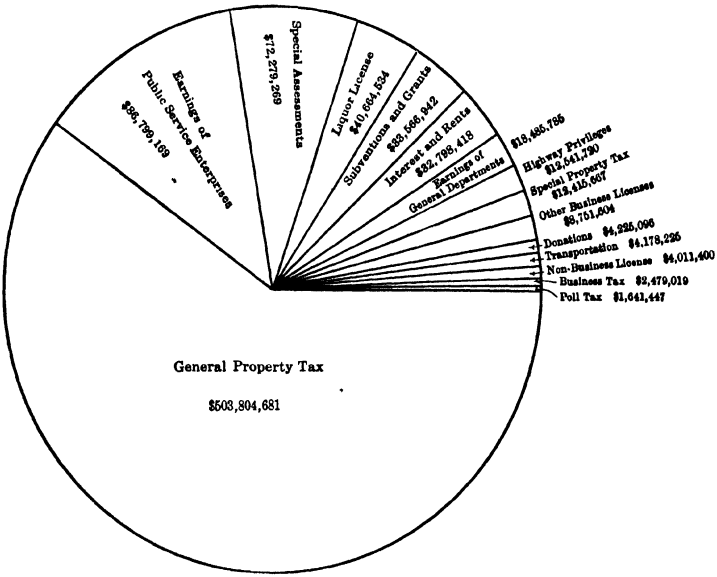


FIGURE 74. — INCOME OF CITIES OVER 30,000: 1912

Examples

1. What portion of the revenues of cities come from each source?

2. Do the sources of a city's revenue follow more closely those of the state or of the Federal Government?

3. Secure from the comptroller of your city a report of the finances of your city giving a statement of the receipts of the city government

from all sources. Make a diagram of the receipts of your city similar to the one in the text for all cities.

4. Does your city own and conduct any public service enterprise? Does it run at a profit or loss?

5. How did the receipts of your city for the last year compare with the disbursements?

6. Secure the latest volume from the U. S. Census Bureau on the receipts and expenditures of cities with population over 30,000 and make comparative charts for cities and groups of cities corresponding to those above.

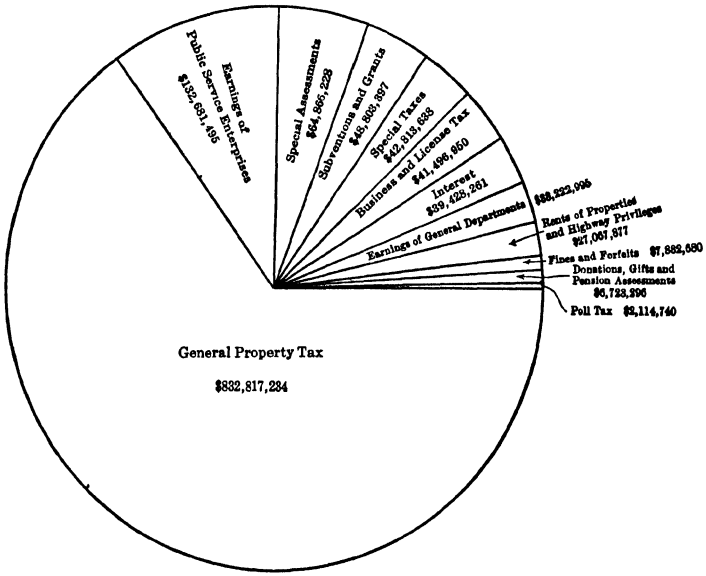


FIGURE 75. — INCOME OF CITIES WITH POPULATION OVER 30,000: 1921

7. What was the per capita income in all cities from all sources. (For population see page 320.)

8. What was the per capita income in your city from all sources?

Find the per capita income in your city ten years ago and compare with the present per capita income.

County Income

The following table gives a summary of all revenues of the 2953 counties in the United States in 1913 and 1922. The main source of revenue is the general property tax. Revenue in lesser amounts is derived from various other sources as indicated.

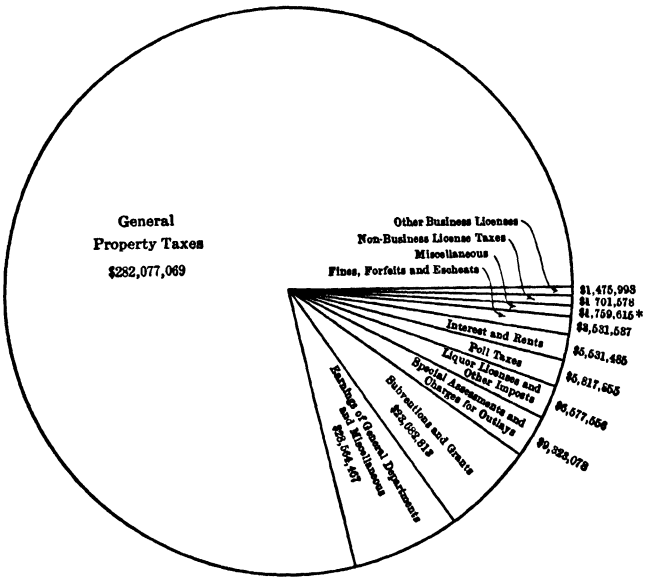


Figure 76. — Income of Counties: 1913

Examples

1. How does the total amount of revenue of counties compare with the total revenue of the Federal Government? With the total revenue of all states? With the total revenue of all cities over 30,000 population?

2. Do the sources of revenue of counties resemble more closely the sources of federal, state, or city revenue?

3. What percentage of county revenue is derived from a general property tax? From poll taxes? From liquor licenses and other imports? From the earnings of general departments and miscellaneous?

4. Make a chart of your county's income showing source and compare with the chart for all counties.

5. What portion of your county's income comes from each source?

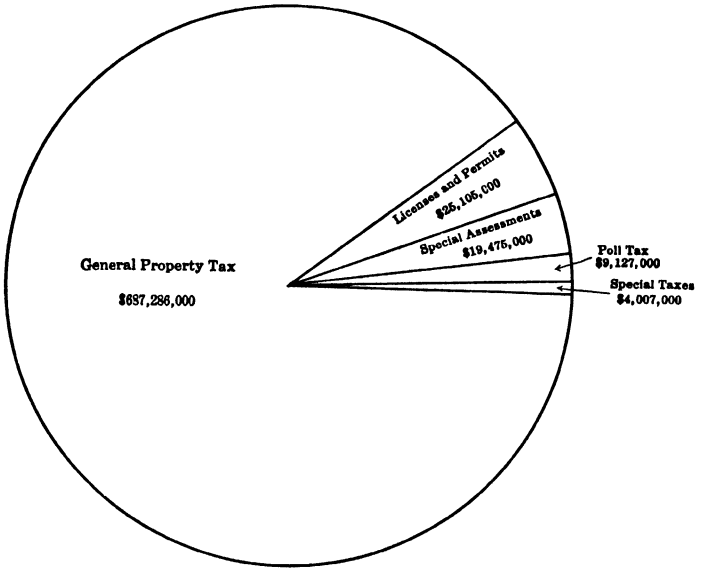


FIGURE 77. — INCOME OF COUNTIES (TAXES ONLY): 1922

PUBLIC DEBTS

In order to distribute the cost of expensive undertakings and place part of the expense upon future generations that will profit thereby, governments go into debt and issue bonds which are to be paid with interest at some specified future time. A bond is a note indorsed by the people through their government promising to pay the face value

at a specified time. Prudence dictates that such notes be conservatively issued and only when the object is distinctly public and permanent in character. It is good business to go into debt to provide a public improvement, but not to provide some temporary service. Like an individual, the people must consider their ability to pay and must, therefore, refrain from extravagant issues of bonds even when the purposes appear meritorious. Prudence also dictates that when a debt is made, provision be also made for payment when due. This is done now in well-administered communities by means of sinking funds, which are accumulated by small amounts each year until the bonds are due, when the total is sufficient to pay the bond. A second method is by fixing the dates of maturity serially so that a small amount comes due each year and is paid out of current taxes.

In considering the following table of public debts care should be taken to observe that population, wealth, and income increased greatly during the periods given. It should be noted, also, that the debt of the United States increased greatly because of war expenditures.

TABLE 132. — GROSS DEBT LESS SINKING FUND ASSETS: 1902, 1912, 1922

STATE	1922	1912	1902
	Amount	*Amount*	*Amount*
States	935,544,000	345,942,000	$234,965,000
Counties	1,272,790,000	371,528,000	196,565,000
Incorporated Places	4,703,322,000	2,884,883,000	1,346,843,000
Other civil divisions	1,778,084,000	219,543,000	86,662,000
United States	22,155,886,000	964,811,000	920,944,000

TOTAL TAXES, LICENSES AND PERMITS, AND SPECIAL ASSESSMENT, OF STATES, COUNTIES, INCORPORATED PLACES, AND SPECIFIED CIVIL DIVISIONS, BY STATES: 1922

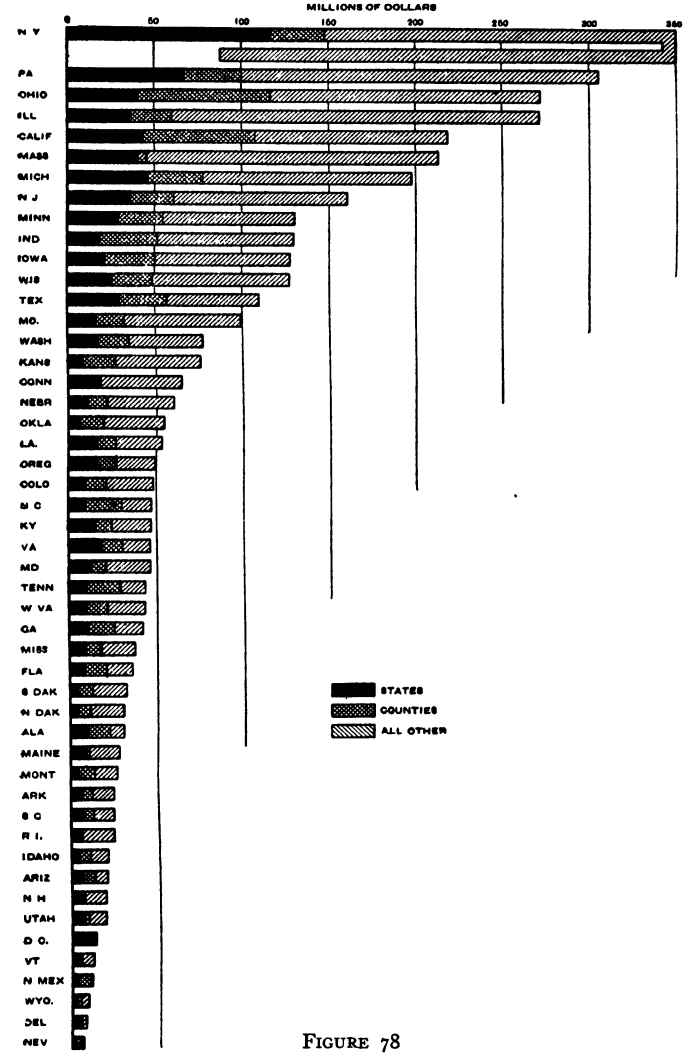


FIGURE 78

TABLE 133.—TOTAL AND PER CAPITA GROSS DEBT LESS SINKING FUND ASSETS OF STATES, COUNTIES, AND ALL OTHER CIVIL DIVISIONS, BY GEOGRAPHIC DIVISIONS AND STATES: 1922 AND 1912

Totals expressed in thousands

[From Report of U. S. Census Bureau on Public Debts, 1922]

GEOGRAPHIC DIVISION AND STATE	GROSS DEBT LESS SINKING FUND ASSETS						
	Total					Per capita	
	1922				1912	1922	1912
	Aggregate	State	County	All other civil divisions			
Total	$8,689,740	$935,544	$1,272,790	$6,481,406	$3,821,897	$79.92	$39.37
NEW ENGLAND	550,709	110,458	14,557	425,694	390,960	72.46	56.95
Maine	42,457	12,906	2,546	27,005	22,798	54.90	30.08
New Hampshire	16,123	3,018	621	12,484	11,300	36.16	25.87
Vermont	11,994	2,112	136	9,746	6,981	34.03	19.39
Massachusetts	329,942	76,996	9,704	243,182	267,129	83.04	75.28
Rhode Island	49,239	9,338		39,901	30,716	79 38	52.99
Connecticut	100,954	6,088	1,490	93,376	52,036	70.33	44.03
MIDDLE ATLANTIC	2,616,431	252,865	190,130	2,173,436	1,548,580	114.19	75.28
New York	1,683,820	186,542	45,886	1,451,392	1,132,432	158.15	116.59
New Jersey	382,172	16,355	73,854	291,963	170,169	116.40	61.89
Pennsylvania	550,439	49,968	70,390	430,081	245,979	61.28	30 34
EAST NORTH CENTRAL	1,652,555	99,446	272,348	1,280,761	546,615	74.62	28.79
Ohio	669,443	30,143	94,490	544,810	239,667	112.25	48.27
Indiana	152,792	2,325	77,115	73,352	67,404	51.21	24.41
Illinois	364,019	13,880	28,632	321,507	139,480	54.66	23.62
Michigan	361,778	50,934	42,632	268,212	59,997	94.09	20.43
Wisconsin	104,523	2,164	29,479	72,880	40,067	38.81	16.56
WEST NORTH CENTRAL	851,543	74,681	185,524	591,338	282,971	66.83	23.62
Minnesota	269,608	20,308	81,262	168,038	70,364	109.99	32.26
Iowa	151,614	1,457	43,228	106,929	35,426	62.11	15.94
Missouri	118,276	30,456	17,915	69,905	61,622	34.46	18.37
North Dakota	40,266	5,913	5,852	28,501	13,261	60.89	20.07
South Dakota	50,554	15,431	6,512	28,611	12,685	78.09	19.72
Nebraska	97,755	1,038	8,757	87,960	36,745	73.93	29.80
Kansas	123,470	78	21,998	101,394	52,868	69.16	31.36

GEOGRAPHIC DIVISION AND STATE	GROSS DEBT LESS SINKING FUND ASSETS						
	Total					Per capita	
	1922				1912	1922	1912
	Aggregate	State	County	All other civil divisions			
SOUTH ATLANTIC	$ 743,216	$123,630	$ 201,463	$ 418,123	$ 255,195	$51.61	$20.02
Delaware	22,451	5,834	5,961	10,656	6,860	98.32	32.98
Maryland	120,954	22,129	7,893	90,932	59,546	81.43	44.76
District of Columbia	156			156	9,061	.36	26.03
Virginia	119,115	21,756	22,102	75,257	61,930	50.33	29.09
West Virginia	70,512	24,181	24,859	21,472	11,195	46.58	8.57
North Carolina	182,711	34,713	67,012	80,986	34,344	69.03	14.88
South Carolina	65,010	8,729	21,556	34,725	21,287	37.64	13.54
Georgia	64,038	5,419	22,810	35,809	32,548	21.56	11.89
Florida	98,269	869	29,270	68,130	18,424	95.96	22.72
EAST SOUTH CENTRAL	370,553	56,984	89,729	223,840	160,820	41.17	18.51
Kentucky	50,519	7,745	12,340	30,434	30,031	20.68	12.85
Tennessee	133,337	19,142	43,528	70,667	59,098	56.27	26.41
Alabama	75,198	15,233	24,025	35,940	43,063	31.37	19.24
Mississippi	111,499	14,864	9,836	86,799	28,628	62.27	15.25
WEST SOUTH CENTRAL	704,546	28,493	142,713	533,340	237,435	66.70	24.95
Arkansas	91,280	2,722	4,680	83,878	13,813	51.03	8.32
Louisiana	126,946	14,829	19,943	92,174	75,007	69.18	42.97
Oklahoma	129,977	4,797	21,850	103,330	60,721	61.75	31.32
Texas	356,343	6,145	96,240	253,958	87,894	73.71	21.07
MOUNTAIN	372,776	50,546	81,151	241,079	112,770	106.39	38.29
Montana	65,229	7,579	27,340	30,310	18,146	110.20	43.29
Idaho	62,193	7,673	11,239	43,281	14,131	136.24	37.30
Wyoming	19,128	4,011	2,444	12,673	4,324	93.02	26.48
Colorado	99,198	12,019	7,784	79,395	39,647	101.78	44.89
New Mexico	25,010	4,954	3,114	16,942	7,662	67.86	20.70
Arizona	44,973	2,740	20,086	22,147	10,389	124.61	45.01
Utah	50,041	9,819	6,427	33,795	15,288	106.85	37.77
Nevada	7,004	1,751	2,717	2,536	3,183	90.49	33 60
PACIFIC	827,411	138,441	95,175	593,795	286,551	141.23	60.08
Washington	169,063	13,191	21,920	133,952	95,971	120.21	71.37
Oregon	138,094	39,983	19,529	78,582	43,828	170.69	57 90
California	520,254	85,267	53,726	381,261	146,752	142.81	55.01

The national, state, and local governments all go into debt, and the amounts which the people owe at this time are considerable. The figures were collected for local, state, and national governments in 1912 and 1922, at which times they owed the following amounts over and above the amounts which were available in sinking funds to pay them.

Examples

1. What was the per capita debt of the United States in 1902, 1912, and 1922?
2. What was the average per capita for all state debts? For municipality debts? For county debts?
3. What was the average per capita for all debts — local, state, and national?
4. What was the increase in each period?
5. What was the percentage rate of increase in each period?
6. Secure the latest data on the public debt of the United States.
7. What is the indebtedness of your city? Your county and state? What is the per capita debt?
8. Secure from the U. S. Census Bureau the latest compilation of figures on the public debt, and make an analysis of the debts of the states and cities.

The Increase in Public Debts

It is necessary that the citizen learn to analyze the burden of public debts if he is to act prudently yet generously in public undertakings. The alarmist who is always in evidence when public expenditures are contemplated misleads many people in this very important matter. Yet there are easy and authentic methods of measuring debts as well as public expenditures. The easiest yardstick is the per capita measurement: How much is the debt per capita? A second method is by comparing the debt with

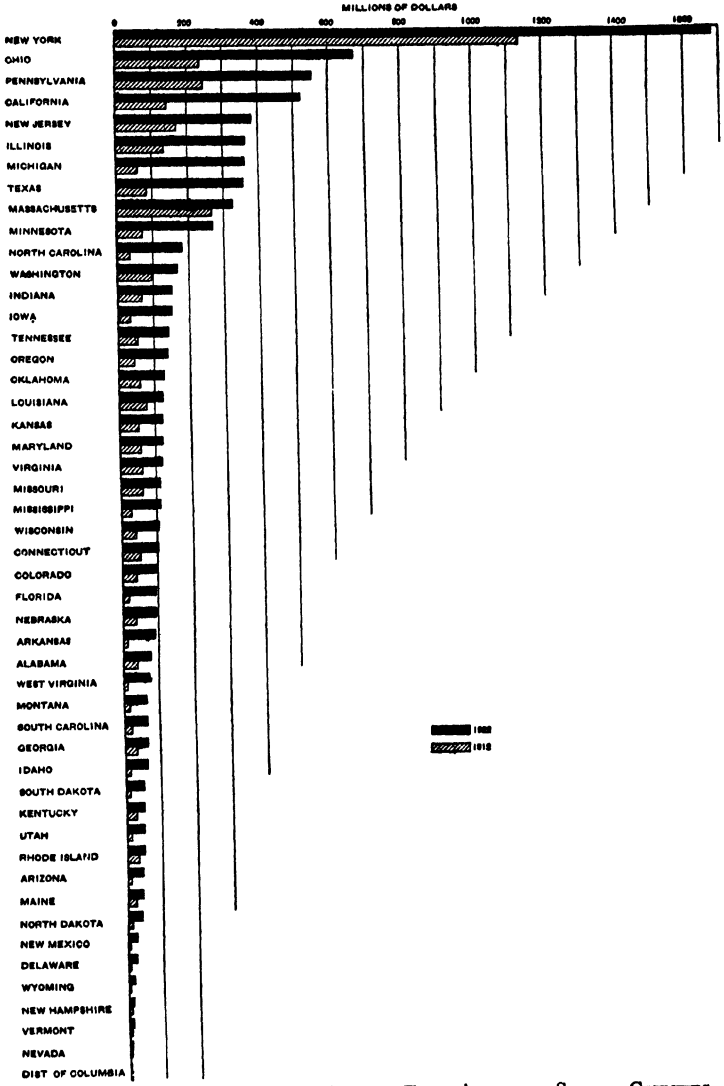


FIGURE 79. — TOTAL DEBT LESS SINKING FUND ASSETS OF STATES, COUNTIES, CITIES, AND ALL OTHER CIVIL DIVISIONS: 1922 AND 1912

the wealth of the country: How much is the debt for every $1000 of wealth?

The U. S. Census Bureau compared the debts by the per capita method in 1919. It showed that the states owed a per capita debt of $4.31 in 1915 and $4.95 in 1919; the cities of 30,000 population and over had a per capita debt of $75.56 in 1915 and $77.53 in 1918; and the nation had a per capita debt of $10.95 in 1915 and $232.50 in 1919.

In 1922 several states had no debt, while the highest — that of Oregon — was $49.42. The average for all the states was $8.64.[1] The cities had an average of $59.65 per capita: the cities over 30,000 averaging $81.22, and the places from 8000 to 30,000 averaging $33.84. The Federal Government had large offsets to its debts. Ten billions were owed by foreign governments to the U. S. Government, and the debts of the states and cities included over a billion dollars investment in income-producing property.

The bogy of public debts is clearly shown by this analysis. The debt is negligible in the states; it is almost negligible in the smaller communities, and is not especially burdensome even in the largest cities; and the federal debt, while large, is only a little over a hundred dollars per capita when European obligations are deducted.

The Wealth of the United States

The expenditures of the various governmental units were $6,349,000,000 in 1922. The total debts amounted to nearly $30,000,000,000. The expenditures of the Federal Government have increased 380 per cent in ten years; those of the states 183 per cent; of the counties 142 per cent, and of in-

[1] State debts have increased greatly since 1922 owing to large issues of bonds for soldier bonuses and for paved roads.

corporated cities and towns 80 per cent. The public debt increased from $4,850,000,000 in 1912.

These figures showing sharp increases startle us and become the source of continuous alarms. Do they represent an excessive burden as compared to other times? We should place over against these increases — the increase in the people's wealth. Fortunately since 1850 the wealth of the country has been estimated by the U. S. Census officials.

TABLE 134. — WEALTH OF THE UNITED STATES: 1850–1922

	TOTAL WEALTH	PER CAPITA WEALTH
1850	$7,135,780,000	307.00
1860	16,159,616,000	513.00
1870	30,068,518,000	779.00
1880	43,642,000,000	870.00
1890	65,037,091,000	1,035.00
1900	88,517,307,000	1,318.00
1912	187,739,071,090	1,965.00
1920	290,000,000,000	2,685.00
1922	320,803,000,000	2,918.00
1924		
1926		

The total wealth is more than 45 times what it was in 1850, while the per capita wealth is over 9 times that of 1850. For comparison the period of the Civil War may be taken. In 1865 the total wealth was about $23,000,000,000, and the federal debt was $2,674,815,000, or 11.6 per cent of the total wealth. In 1922 the federal debt was $22,155,000,000, and the wealth of the nation was $320,000,000,000. In 1865 for every $1000 of property there was a federal debt of $116; in 1922 the burden of federal debt was $69 per thousand of wealth, and nearly half of that was due from foreign governments.

TABLE 135. — ESTIMATED VALUE OF ALL PROPERTY, BY GEOGRAPHIC DIVISIONS AND STATES: 1912 AND 1922

[From Report of U. S. Census Bureau on National Wealth, 1922]

GEOGRAPHIC DIVISION AND STATE	1922			1912		
	TOTAL	TAXABLE	EXEMPT	TOTAL	TAXABLE	EXEMPT
UNITED STATES	$320,803,862	$300,298,043	$20,505,819	$186,299,664	$173,986,144	$12,313,520
GEOGRAPHIC DIVISIONS						
New England	24,414,316	22,552,175	1,862,141	11,917,922	11,034,679	883,243
Middle Atlantic	77,663,196	71,357,846	6,305,350	47,901,265	43,101,417	4,799,848
East North Central	68,823,014	65,516,364	3,306,650	39,607,605	37,656,428	1,951,177
West North Central	46,018,882	44,079,534	1,939,348	30,610,362	29,019,780	1,590,582
South Atlantic	29,168,459	27,261,407	1,907,052	14,588,821	13,522,750	1,066,071
East South Central	12,990,375	12,348,530	641,845	7,410,703	7,093,515	317,188
West South Central	19,860,889	18,837,159	1,023,730	13,208,851	12,461,388	747,463
Mountain	12,206,101	10,454,658	1,751,443	6,584,801	6,332,104	252,697
Pacific	23,573,598	21,805,338	1,768,260	13,776,982	13,071,731	705,251
NEW ENGLAND:						
Maine	2,006,531	1,918,806	87,725	1,017,739	978,511	39,228
New Hampshire	1,374,135	1,283,312	90,823	657,904	622,025	35,879
Vermont	842,040	799,191	42,849	504,818	474,492	30,326
Massachusetts	12,980,839	11,895,156	1,085,683	6,381,142	5,813,384	567,758
Rhode Island	1,924,326	1,813,706	110,620	986,596	908,487	78,109
Connecticut	5,286,445	4,842,004	444,441	2,369,723	2,237,780	131,943
MIDDLE ATLANTIC:						
New York	37,035,262	33,019,198	4,016,064	25,664,002	22,565,526	3,098,476
New Jersey	11,794,189	11,169,568	624,621	6,011,310	5,630,195	381,115
Pennsylvania	28,833,745	27,169,080	1,664,665	16,225,953	14,905,696	1,320,257
EAST NORTH CENTRAL:						
Ohio	18,489,552	17,553,217	936,335	9,123,301	8,766,999	356,302
Indiana	8,829,726	8,336,714	493,012	5,358,951	5,115,330	243,621
Illinois	22,232,794	21,190,949	1,041,845	15,500,164	14,612,181	887,983
Michigan	11,404,861	10,889,887	514,974	5,297,419	5,039,419	258,000
Wisconsin	7,866,081	7,545,597	320,484	4,327,770	4,122,499	205,271
WEST NORTH CENTRAL:						
Minnesota	8,547,918	8,237,085	310,833	5,432,278	5,151,902	280,376
Iowa	10,511,682	10,196,400	315,282	7,708,967	7,277,608	431,359
Missouri	9,981,409	9,611,443	369,966	5,727,948	5,432,424	295,524

GEOGRAPHIC DIVISION AND STATE	1922			1912		
	TOTAL	TAXABLE	EXEMPT	TOTAL	TAXABLE	EXEMPT
WEST NORTH CENTRAL — *Continued*						
North Dakota	$ 2,467,772	$ 2,167,239	$ 300,533	$ 2,112,939	$ 2,008,938	$ 104,001
South Dakota	2,925,968	2,744,193	181,775	1,327,215	1,259,335	67,880
Nebraska	5,320,075	5,128,349	191,726	3,720,813	3,530,960	189,853
Kansas	6,264,058	5,994,825	269,233	4,580,202	4,358,613	221,589
SOUTH ATLANTIC:						
Delaware	625,765	587,631	38,134	304,918	290,691	14,227
Maryland	3,990,730	3,741,779	248,951	2,235,483	2,059,741	175,742
District of Columbia	1,697,270	1,218,846	478,424	1,171,704	765,164	406,540
Virginia	4,891,570	4,542,154	349,416	2,402,412	2,287,183	115,229
West Virginia	4,677,919	4,446,359	231,560	2,427,930	2,303,887	124,043
North Carolina	4,543,110	4,381,177	161,933	1,685,408	1,623,068	62,340
South Carolina	2,404,845	2,288,659	116,186	1,261,048	1,211,054	49,994
Georgia	3,896,759	3,725,821	170,938	2,163,033	2,079,630	83,403
Florida	2,440,491	2,328,981	111,510	936,885	902,332	34,553
EAST SOUTH CENTRAL.						
Kentucky	3,582,391	3,401,363	181,028	2,277,004	2,161,324	115,680
Tennessee	4,228,251	3,975,583	252,668	1,883,698	1,797,705	85,993
Alabama	3,002,043	2,890,418	111,625	2,015,430	1,938,390	77,040
Mississippi	2,177,690	2,081,166	96,524	1,234,571	1,196,096	38,475
WEST SOUTH CENTRAL.						
Arkansas	2,599,617	2,519,788	79,829	1,721,900	1,649,912	71,988
Louisiana	3,416,860	3,237,527	179,333	1,989,813	1,881,947	107,866
Oklahoma	3,993,524	3,627,125	366,399	3,117,546	2,857,604	259,942
Texas	9,850,888	9,452,719	398,169	6,379,592	6,071,925	307,667
MOUNTAIN:						
Montana	2,223,189	1,990,031	233,158	1,132,758	1,096,033	36,725
Idaho	1,533,941	1,257,585	276,356	578,999	561,678	17,231
Wyoming	976,239	649,709	326,530	355,732	346,722	9,010
Colorado	3,229,412	2,859,784	369,628	2,315,310	2,214,865	100,445
New Mexico	851,836	737,296	114,540	495,118	483,012	12,106
Arizona	1,314,291	1,157,855	156,436	456,726	441,973	14,753
Utah	1,535,477	1,361,286	174,191	796,300	749,499	46,801
Nevada	541,716	441,112	100,604	453,858	438,232	15,626
PACIFIC:						
Washington	5,122,405	4,696,334	426,071	3,183,058	3,019,388	163,670
Oregon	2,059,459	3,059,305	360,154	2,057,439	1,956,627	100,812
California	15,031,734	14,049,699	982,035	8,536,485	8,095,716	440,769

Examples

1. Estimate the per capita wealth of each state.
2. How does the wealth of each state per capita compare with the indebtedness of each state?
3. Has the public debt, excepting the war debt, increased per thousand of valuation?
4. What is the public revenue for all purposes per thousand of valuation?
5. Compare public income with public wealth in 1912 and 1922.

Sources for Research

1. The *Statistical Abstract of the United States*, the *World Almanac*, and Chicago *Daily News Almanac* give the latest data on some of the subjects of this chapter.
2. The U. S. Census Bureau publishes annual volumes of revenue and expenditures and public debts of state and city governments. The same bureau published volumes on *Wealth, Debt, and Taxation in 1912 and 1922*, which give the most detailed information of cities, counties, and states.
3. The U. S. Budget Bureau publishes an annual analysis of income and expenditures with their suggested budget.
4. The State Auditor or Comptroller is the state official from whom state information can be obtained.
5. City and county information may be obtained from the city or county auditor or clerk.

CHAPTER XV

GOVERNMENT BY THE PEOPLE

The people perform their community functions largely through representatives whom they select. The making of laws, the management of the people's business, the settlement of disputes, are nearly all performed by representatives selected directly or indirectly by the people. The control of private enterprise for the benefit of the general welfare is likewise carried out by the representatives of the people. The American democracy is, in fact, a coöperative enterprise in which each citizen takes a part of the responsibility through his power to help select representatives who act for the people in the local, state, and Federal governments.

How does the community express itself in choosing its principal representatives? By majority selection. We use the ballot box as the means, and we place the people's power in the hands of those whom the majority favors. But there are practical difficulties which call for definition and analysis, in determining whom the majority favors.

Majority means more than half, so that if we have strict majority rule a candidate ought to receive at least one vote more than half of all the votes. In fact, we select by pluralities in most instances; this means that a candidate receiving more votes than any other candidate is elected. In this way majority rule is sometimes not at all what it should signify. If there are five candidates for an office

and the first receives 3500, the second, 3200, the third, 2800, the fourth, 2600, and the fifth, 2400 votes, the candidate having 3500 votes is elected, although he received less than 25 per cent of the votes. This is by no means majority rule.

But the question arises in the inquiring mind, what does a majority mean? Does it mean a majority of those voting or does it mean a majority of all citizens entitled to vote? Not all people turn out to vote. In fact, many millions ignore their plain civic duty in the most important elections. At the presidential election of 1920 there were cast 26,674,171 votes, but there were more than 54,000,000 citizens over 21 years of age entitled to vote. Less than 50 per cent of all the voting population actually voted. Did the election result in majority rule? In actual practice we must assume that those who do not vote accept the result by their failure to vote and cannot legitimately complain. Citizens must deplore such laxity, but majority rule is not thus destroyed.

The difficulty of majority rule is more real when we consider a multiplicity of candidates and the possible selection of officials by a small percentage of the votes. While legally we accept the result of such an election and support the official thus elected, we should consider means of perfecting majority rule, so that it will really be what it purports to be — the rule by an actual majority of the people, expressing their will at an election.

Plans to promote true majority rule have been adopted in several forms. The one most commonly used in this country is to have two elections. If at the first election no one receives a majority of all the votes cast, then the two who receive the largest number of votes are voted for

at the second election. One will, therefore, have a majority of the votes in the second election, since only two are running. It may be, however, that at the second election fewer votes are cast and perhaps the winning candidate has fewer votes than the leader in the first election. Again we must conclude that absence from the polls gives silent consent to the winner.

Another method is to vote for first and second choice. Each voter marks his first choice among the candidates and also his second choice. If no one has a majority of first-choice ballots, the second-choice ballots are added. The extension of this system provides for second, third, and more choices.

One system of counting the second-choice votes provides that if there are three or more candidates, the candidate who receives the smallest number of first-choice votes is dropped and the second-choice votes cast by those who voted for him are distributed as cast. If there is still no majority, the next lowest man is dropped and the second-choice votes on his ballots are distributed to those for whom cast and so on until all but two candidates are eliminated. One of these will then have a majority. Example: *A* receives 4500 first-choice votes, *B* receives 3500, and *C*, 1500. No one receives a majority, and so *C* is dropped. Of the 1500 persons voting for *C*, 1200 voted for *A* for second choice and 300 for *B*. When those votes are added to *A*'s and *B*'s total, the result is 5700 for *A* and 3800 for *B*, which gives *A* a clear majority.

Another modern idea is proportional representation. By this term is meant the plan to secure for each group of opinion some voice in the legislatures and councils. At present in most elections the party which wins has all of

the representatives while the one that loses has none. The proportional idea is to enable each considerable group to select some representatives. It is provided that a number of representatives, instead of one, be selected from each district and that an elector may vote one vote each for as many candidates as are to be chosen, or he may vote for one candidate as many votes as there are candidates to be selected. Thus, if there are three representatives to be chosen from a district, an elector may vote one vote for each of three candidates or he may vote three votes for one candidate. By this means if a considerable number of electors vote all of their votes for one candidate he is given a chance to win. The minority may thus by plumping their votes gain one representative of the three. Such a plan is carried out in the selection of the lower house of the Illinois Legislature and in several cities. It is in more common use abroad.

The plan of proportional representation as carried out in several cities, notably Cleveland, is as follows: Assume that there are five councilmen to be elected from a district. Under the plan each elector votes for one person only for his first choice. He may vote also for his second, third, and other choices. To be elected, a candidate must receive a "quota," which is the number obtained by dividing the total vote by the number to be chosen plus one. If there are 12,500 votes cast to fill five positions, a candidate must receive 2084 ballots, which is the total number of ballots divided by six. If no one receives that number of first-choice votes, then the lowest candidate is dropped and the second-choice votes of those who voted for him are distributed as cast. If still no one has a quota, the next lowest man is dropped, and so on until five persons receive a quota and are elected. If a candidate receives more than 2084

first-choice votes, the extra votes are distributed among the others as cast for second choice.

Voting Population

In 1920, there were 60,886,520 persons in the United States 21 years of age and over. Of these, 54,421,832 were citizens. Of the citizens, 48,200,127 were native-born, and 6,221,705 were foreign-born who had been naturalized. The native-born citizens consisted of 24,339,776 men and 23,860,351 women, and the naturalized citizens, 3,322,104 men and 2,899,601 women.

The total of 54,421,832 citizens over 21 years of age did not mean that many who were able to vote. The number is reduced by several causes. Paupers, insane, and felons are excluded by all states, and the number in these classes is quite large. Moreover, several states exclude persons who cannot read and write. Then there are many hundreds of thousands who are so aged, infirm, sick, or disabled as to be unable to go to the polls. There are also many thousands who are unavoidably absent from home and are thus deprived of their suffrage. Making all due allowances it may be fairly estimated that there were in 1920 about 50,000,000 voters who were entitled and able to vote. In the presidential election of 1920 the total vote cast in the whole country was 26,674,171, leaving twenty-three and a quarter millions of qualified voters who did not cast their ballots.

Examples

1. What percentage of the total population were voters in 1920?
2. What percentage of the voters cast their ballots?
3. Estimate the total number of people in 1900 entitled to vote,

taking into account that at that time only Colorado, Wyoming, Utah, and Idaho had woman suffrage.

4. What percentage of the voters voted in 1900?

The extent to which citizens fail to vote may be figured for each state from Tables 136 and 137, which show the number of votes cast in each state in 1920, the citizens of voting age, and the vote in each presidential year since 1896.

In studying these tables the population must be estimated for the years between the census years. Due allowance must be made also in the census years 1900 and 1920 for the fact that in the former year the census was taken as of January 1, and in 1920 as of June 1, while the election was held in November. Approximately five months' increase must be allowed for in 1900 and ten months' in 1920.

Allowance must be made also for the increased vote due to the granting of woman suffrage, which became effective throughout the country in 1920. The states which had woman suffrage from 1896 to 1908 were Colorado, Idaho, Utah, and Wyoming. By 1912 five states had been added: Arizona, California, Kansas, Oregon, and Washington. Before 1916 two other states, Montana and Nevada, were added, while Illinois granted suffrage partially, permitting women to vote for president.

Some allowance must be made in a few states which require literacy for voting,[1] and also in a few which permit aliens to vote if they have declared their intentions to become citizens.

[1] The following states have a literacy test: Massachusetts, Arizona, California, Delaware, Maine, Connecticut, New Hampshire, New York, Alabama, Maryland, Arkansas, Georgia, Louisiana, Mississippi, South Carolina, North Carolina, Virginia, Florida, Washington, Wyoming, North Dakota, and Oklahoma.

TABLE 136. — MEN AND WOMEN OF VOTING AGE: 1920

STATE	WOMEN	MEN	STATE	WOMEN	MEN
Alabama	566,643	568,886	Nebraska	327,558	358,789
Arizona	60,431	80,387	Nevada	17,224	26,195
Arkansas	413,078	448,497	New Hampshire	119,407	116,059
California	930,152	998,095	New Jersey	768,590	756,600
Colorado	244,993	274,921	New Mexico	76,354	92,254
Connecticut	321,451	309,143	New York	2,587,163	2,521,382
Delaware	62,001	64,232	North Carolina	605,921	601,422
District of Columbia	159,949	132,988	North Dakota	133,568	159,262
Florida	243,909	262,751	Ohio	1,588,675	1,639,619
Georgia	707,574	707,198	Oklahoma	466,217	538,299
Idaho	97,705	122,475	Oregon	210,484	240,083
Illinois	1,708,428	1,754,451	Pennsylvania	2,168,185	2,158,549
Indiana	841,818	860,834	Rhode Island	149,839	138,721
Iowa	666,856	700,356	South Carolina	389,820	387,149
Kansas	474,414	509,133	South Dakota	147,397	174,486
Kentucky	627,158	651,260	Tennessee	602,774	605,445
Louisiana	443,827	453,051	Texas	1,064,431	1,169,423
Maine	210,798	210,236	Utah	100,681	106,448
Maryland	408,867	408,887	Vermont	99,173	99,440
Massachusetts	966,468	888,782	Virginia	588,652	603,898
Michigan	896,881	984,716	Washington	340,871	406,087
Minnesota	588,770	648,433	West Virginia	337,596	373,288
Mississippi	433,361	438,733	Wisconsin	652,933	689,048
Missouri	970,947	998,139	Wyoming	43,186	60,293
Montana	126,774	163,057	United States	26,759,952	27,661,880

TABLE 137. — POPULAR VOTE FOR PRESIDENTIAL ELECTORS: 1896–1920

[Source: Reports of State officials on file in the Department of State]

STATE	1896	1900	1904	1908	1912	1916	1920	1924	1928
Alabama	194,574	158,942	108,845	103,809	117,879	131,177	241,070		
Arizona					23,722	58,021	66,803		
Arkansas	148,508	127,444	116,421	152,126	124,029	168,310	183,637		
California	297,496	302,399	331,545	386,597	673,527	999,551	943,463		
Colorado	189,819	220,665	243,687	263,877	266,880	293,966	292,053		
Connecticut	174,402	180,140	191,117	189,999	190,398	213,874	364,027		
Delaware	31,538	42,001	43,875	48,024	48,693	51,810	94,836		
Florida	46,456	39,226	39,307	49,360	51,891	80,803	145,681		
Georgia	163,262	122,736	130,992	132,794	121,420	158,690	154,049		
Idaho	29,621	57,701	72,578	97,288	105,755	134,615	138,334		
Illinois	1,089,008	1,130,873	1,075,669	1,154,751	1,140,173	2,192,707	2,090,468		
Indiana	637,124	663,840	681,934	721,126	654,474	718,848	1,262,398		
Iowa	521,617	530,189	485,902	494,770	492,356	516,495	894,094		
Kansas	335,787	353,766	328,557	375,946	365,497	629,813	570,243		
Kentucky	445,956	467,600	435,765	490,687	453,698	519,947	918,711		
Louisiana	101,046	67,904	53,908	75,146	79,377	92,982	126,057		
Maine	118,504	105,721	96,037	106,336	129,640	136,407	197,530		
Maryland	250,877	264,288	224,224	238,531	231,981	262,039	427,264		
Massachusetts	417,367	414,697	445,146	456,926	488,056	531,817	990,113		
Michigan	544,958	544,375	525,099	541,749	550,976	648,507	1,045,388		
Minnesota	338,540	316,311	292,959	331,304	334,219	387,364	730,010		
Mississippi	70,472	59,103	58,377	66,904	64,528	86,159	82,492		
Missouri	558,329	683,656	643,861	715,874	698,562	786,762	1,331,120		
Montana	53,217	63,693	64,444	68,822	79,826	177,675	179,006		
Nebraska	224,174	241,430	225,732	266,799	249,208	286,177	382,653		

STATE	1896	1900	1904	1908	1912	1916	1920	1924	1928
Nevada	10,314	10,196	12,115	24,526	20,115	33,316	27,194		
New Hampshire	83,567	92,348	90,097	89,592	87,960	89,123	159,092		
New Jersey	371,047	401,206	432,548	467,198	424,622	495,536	908,638		
New Mexico					51,245	66,967	105,399		
New York	1,424,140	1,548,006	1,617,770	1,638,350	1,587,983	1,706,354	2,893,672		
North Carolina	330,990	292,672	208,110	252,310	244,455	289,912	538,758		
North Dakota	47,379	57,795	70,290	94,582	86,580	108,677	205,776		
Ohio	1,014,295	1,035,789	1,004,668	1,121,588	1,037,094	1,165,086	2,019,500		
Oklahoma				255,228	253,801	292,416	486,610		
Oregon	97,414	84,216	90,154	110,889	137,040	261,340	237,007		
Pennsylvania	1,194,358	1,173,214	1,236,738	1,267,443	1,217,502	1,297,097	1,849,692		
Rhode Island	54,781	56,548	68,656	72,317	77,894	87,816	167,386		
South Carolina	68,938	50,862	55,140	66,398	50,350	63,531	66,442		
South Dakota	82,950	96,124	101,395	114,775	116,325	128,942	181,419		
Tennessee	323,796	274,153	242,788	257,515	247,821	272,194	428,655		
Texas	526,693	423,706	234,008	292,472	301,788	372,461	411,426		
Utah	78,119	93,130	101,626	108,611	112,385	142,915	145,828		
Vermont	63,831	55,785	51,887	52,654	62,841	64,465	89,905		
Virginia	294,959	264,470	130,544	137,066	136,976	153,990	230,997		
Washington	93,583	107,524	145,251	183,879	322,799	381,030	397,394		
West Virginia	201,768	220,815	240,026	258,151	268,560	289,842	509,942		
Wisconsin	447,063	442,613	443,014	454,435	399,972	449,377	705,686		
Wyoming	20,606	24,646	30,713	37,609	42,296	51,840	56,253		
Total	13,813,243	13,964,518	13,523,519	14,887,133	15,031,169	18,528,743	26,674,171		
Plurality:									
Republican	567,692	861,459	2,544,343	1,269,900			7,004,847		
Democratic					2,160,194	591,385			

Further allowance should also be made for those states in which there is no contest at the general election. In the South, for example, the real contest is settled at the preliminary election for nomination — the primary. After the Democratic Party in those states has determined its nominees there is no contest since the votes of other parties are negligible. Certain strongly Republican states show a similar condition.

In 1900 there were 21,134,299 males over 21 years of age. If we assume that the same percentage were voters as in 1920, there were about 18,430,120 male voters. The states of Colorado, Wyoming, Idaho, and Utah had woman suffrage in 1900, but inasmuch as their population was small not many thousands would be added to the total. The total vote cast in 1900 was 13,964,518. Making allowance for the citizens who were unable to vote for the causes mentioned before, it is probable that fully 18,000,000 persons were entitled and able to vote. Thus about 77 per cent of the voters cast their ballots in 1900.

It is a lamentable fact that interest in state and local elections is even less than that displayed by the figures given for national elections.

For comparison the vote of a few of the states for governor in 1922 is given. These facts indicate a still greater stay-at-home citizenship.

TABLE 138. — VOTE FOR GOVERNOR IN FIVE STATES: 1922

STATE	TOTAL VOTE
New York	2,527,592
Wisconsin	481,442
Pennsylvania	1,464,603
Nebraska	395,240
Michigan	583,660

Examples

1. What was the approximate number of voters in your state not voting at the election of 1920 for President? In 1924?

2. Estimate the population in 1924 and give the approximate number not voting in 1924 for President.

3. How many voters are there estimated to be in your city or county? How many registered? How many voted for President at the last election? For other offices?

4. How many people voted in the last primary election? What was the approximate number? Who did not vote in the primary election?

5. Make an estimate of the percentage of voters not voting at the presidential elections of 1908, 1912, and 1916.

6. What propositions have been voted upon by the people of your state in recent years in a referendum to the people? What percentage of the vote was cast?

7. On December 12, 1922, a special election was called in Illinois to vote on a new constitution for the state. At this election of the highest importance to the citizenship the entire vote was 1,106,696. What percentage was that of the total potential vote?

8. Compile a table for 1924 showing the vote by states, and estimate the number of voters who did not vote.

The Selection of the President

The federal system of government in the United States, under which each state votes as a unit in the election of the President, makes difficult the true application of the principle of majority rule in the selection. The method of selection is as follows: Each state is given as many votes in the electoral college as it has senators and representatives in the United States Congress. The total number of votes for all of the states is 531. To win the election a candidate must receive a majority of the electoral votes, or 266.

Under this system the total vote of the country does not decide. The candidate must carry enough states to make a total of 266 electoral votes. Even though he have a majority of all of the votes cast, it may not result in his election. In 1888 Cleveland had over 100,000 more votes than Harrison, but the latter's votes were so distributed that he carried states enough to give him a majority of the electoral votes. Upon the vote in each state the result may turn as it has in many elections. In 1884 Cleveland carried the state of New York by a narrow margin of 1047 votes. If 524 voters who voted for him in that state had voted for his opponent, the whole result would have been changed, for New York's electoral vote turned the scale in the electoral college. In almost every presidential election the change of a few thousand, and sometimes a few hundred, votes in close states would have changed the result.

Instructive deductions can be made from a careful study of these tables. Such a study will fasten in the mind the system of elections under which the President and Vice President are chosen and will also enlighten concerning the political strategy in presidential campaigns. It will disclose the significance of the intensive battles in "doubtful states," for it is the few doubtful states upon which the result will turn, and the political strategists must determine which states are doubtful.

Another important matter to be found in these tables is the working of the electoral system when three or more strong parties are contending. A successful candidate must receive a majority of the electoral votes or the election of the President goes to the House of Representatives, and that of the Vice President to the Senate. This has happened twice in our history and may readily occur again.

TABLE 139. — ELECTIONS — PRESIDENT VOTE, BY STATES: 1908–1916

1908

STATE	TAFT, REP.	BRYAN, DEM.	DEBS, SOC.	CHAFIN, PROH.	HISGEN, IND.	STATE	TAFT, REP.	BRYAN, DEM.	DEBS, SOC.	CHAFIN, PROH.	HISGEN, IND.
Ala. . . .	26,283	74,374	1,399	665	495	Nev. . . .	10,775	11,212	2,103		436
Ark. . . .	56,679	87,015	5,842	1,194	289	N. H. . . .	53,149	33,655	1,299	905	584
Cal. . . .	214,398	127,492	28,659	11,770	4,278	N. J. . . .	265,298	182,522	10,249	4,930	2,916
Col. . . .	123,700	126,644	7,974	5,559		N. Y. . . .	870,070	667,468	38,451	22,667	35,817
Conn. . . .	112,815	68,255	5,113	2,380	728	N. C. . . .	114,887	136,928	345		
Del. . . .	25,014	22,071	239	670	30	N. Dak. . .	57,680	32,885	2,421	1,496	43
Fla. . . .	10,654	31,104	3,747	1,356	553	Ohio . . .	572,312	502,721	33,795	11,402	439
Ga. . . .	41,692	72,350	584	1,059	77	Okla. . . .	110,558	122,406	21,779		244
Idaho . . .	52,621	36,162	6,400	1,968	119	Ore. . . .	62,530	38,049	7,339	2,682	289
Ill. . . .	629,932	450,810	34,711	29,364	7,724	Penn. . . .	745,779	448,778	33,913	36,694	1,057
Ind. . . .	348,993	338,262	13,476	18,045	514	R. I. . . .	43,942	24,706	1,365	1,016	1,105
Iowa . . .	275,209	200,771	8,287	9,837	404	S. C. . . .	3,963	62,288	101		42
Kan. . . .	197,216	161,209	12,420	5,033	68	S. Dak. . .	67,466	40,266	2,846	4,039	88
Ky. . . .	235,711	244,092	4,185	5,887	200	Tenn. . . .	118,324	135,638	1,870	300	332
La. . . .	8,958	63,568	2,538		79	Tex. . . .	65,666	217,302	7,870	1,634	115
Me. . . .	66,987	35,403	1,758	1,487	700	Utah . . .	61,165	42,601	4,890		92
Md. . . .	116,513	115,908	2,323	3,302	485	Vt. . . .	39,558	11,500		802	804
Mass. . . .	265,966	155,543	10,781	4,781	19,239	Va. . . .	52,573	82,946	255	1,111	51
Mich. . . .	335,580	175,771	11,586	16,974	760	Wash. . .	106,062	58,691	14,177	4,700	249
Minn. . .	195,843	109,401	14,527	11,107	426	W. Va. . .	137,869	111,418	3,679	5,139	46
Miss. . . .	4,363	58,286	978			Wis. . . .	247,747	166,632	28,164	11,564	
Mo. . . .	347,203	346,574	15,431	4,284	402	Wyo. . . .	20,846	14,918	1,715	66	64
Mont. . .	32,333	29,326	5,855	827	443						
Neb. . . .	126,997	131,099	3,524	5,179		Total . .	7,678,908	6,409,104	420,973	253,840	82,872

TABLE 139 (*Continued*). — ELECTIONS — PRESIDENT VOTE, BY STATES: 1908–1916

1912

STATE	TAFT, REP.	WILSON, DEM.	ROOSEVELT, PROG.	CHAFIN, PROH.	DEBS, SOC.	STATE	TAFT, REP.	WILSON, DEM.	ROOSEVELT, PROG.	CHAFIN, PROH.	DEBS, SOC.
Ala.	9,732	82,438	22,680		3,029	Nev.	3,196	7,986	5,620		3,313
Ariz.	3,021	10,324	6,949	265	3,163	N. H.	32,927	34,724	17,794	535	1,980
Ark.	24,467	68,838	21,673	898	8,153	N. J.	88,834	170,282	145,409	2,875	15,900
Cal.	3,914	283,436	283,610	23,366	79,201	N. M.	17,900	22,139	8,347		2,859
Col.	58,386	114,232	72,306	5,063	16,418	N. Y.	455,428	655,475	390,021	19,427	63,381
Conn.	68,324	74,561	34,129	2,068	10,056	N. C.	29,139	144,507	69,667	1,025	117
Del.	15,997	22,631	8,886	623	556	N. D.	23,090	29,555	25,726	1,243	6,966
Fla.	4,279	36,417	4,535	1,854	4,806	Ohio	278,168	424,834	229,807	11,511	90,144
Ga.	5,191	93,076	21,980	147	1,026	Okla.	90,786	119,156		2,185	41,674
Idaho	32,810	33,921	25,527	1,537	11,960	Ore.	34,673	47,064	37,600	4,360	13,343
Ill.	253,593	405,048	386,478	15,710	81,278	Penn.	273,305	395,619	447,426	19,533	80,915
Ind.	151,267	281,890	162,007	19,249	36,931	R. I.	27,703	30,412	16,878	616	2,049
Iowa	119,805	185,325	161,819	8,440	16,967	S. C.	536	48,357	1,293		164
Kan.	74,845	143,663	120,210		26,779	S. D.		48,942	58,811	3,910	4,662
Ky.	115,512	219,584	102,766	3,233	11,647	Tenn.	59,444	130,335	53,725	825	3,492
La.	3,834	60,971	9,323		5,249	Tex.	26,745	219,489	28,530	1,698	24,896
Me.	26,545	51,113	48,495	946	2,541	Utah	42,100	36,579	24,174		9,023
Md.	54,956	112,674	57,789	2,244	3,996	Vt.	23,332	15,354	22,132	1,095	928
Mass.	155,948	173,408	142,228	2,754	12,616	Va.	23,288	90,332	21,777	709	820
Mich.	152,244	150,751	214,584	8,934	23,211	Wash.	70,445	86,840	113,698	9,810	40,134
Minn.	64,334	106,426	125,856	7,886	27,505	W. Va.	56,667	113,046	78,977	4,534	15,336
Miss.	1,595	57,227	3,645		2,061	Wis.	130,695	164,228	62,460	8,586	33,481
Mo.	207,821	330,746	124,371	5,380	28,466	Wyo.	14,560	15,310	9,232	434	2,760
Mont.	18,512	27,941	22,456	32	10,885	Total	3,483,922	6,286,214	4,126,020	208,923	897,011
Neb.	54,029	109,008	72,614	3,383	10,174	Plurality		2,160,194			

TABLE 139 (*Concluded*). — ELECTIONS — PRESIDENT VOTE, BY STATES: 1908–1916

1916

STATE	HUGHES, REP.	WILSON, DEM.	PROG.	HANLY, PROH.	BENSON, SOC.	STATE	HUGHES, REP.	WILSON, DEM.	PROG.	HANLY, PROH.	BENSON, SOC.
Ala . . .	22,809	99,409		1,034	1,925	Nev. . . .	12,127	17,776		348	3,065
Ariz. . . .	20,524	33,170		1,153	3,174	N. H. . . .	43,723	43,779		303	1,318
Ark. . . .	47,148	112,148		2,015	6,999	N. J. . . .	269,352	211,645		3,187	10,462
Cal. . . .	462,394	466,200		27,698	43,259	N. M. . . .	31,163	33,693		112	1,999
Col. . . .	102,308	178,816		2,793	10,049	N. Y. . . .	869,115	759,426	10,172	19,031	45,944
Conn. . . .	106,514	99,786		1,789	5,179	N. C. . . .	120,988	168,383		51	490
Del. . . .	26,011	24,753		566	480	N. D. . . .	53,471	55,206			
Fla. . . .	14,611	55,984		4,855	5,353	Ohio . . .	514,753	604,161		8,080	38,092
Ga. . . .	11,225	125,845	20,653		967	Okla. . . .	97,233	148,113	234	1,646	45,190
Idaho . . .	55,368	70,054		1,127	8,066	Ore. . . .	126,813	120,087		4,729	9,711
Ill. . . .	1,152,549	950,229		26,047	61,394	Penn. . . .	703,734	521,784		28,525	42,637
Ind. . . .	341,005	334,063	3,898	16,368	21,855	R. I. . . .	44,858	40,394		470	1,914
Iowa . . .	280,449	221,699		3,371	10,976	S. C. . . .	1,550	61,846			135
Kan. . . .	277,658	314,588		12,882	24,685	S. D. . . .	64,217	59,191		1,774	3,760
Ky. . . .	241,854	269,990		3,036	4,734	Tenn. . . .	116,223	153,282		147	2,542
La. . . .	6,466	79,875	6,349		292	Tex. . . .	64,999	286,514		1,985	18,963
Me. . . .	69,506	64,127		597	2,177	Utah . . .	54,137	84,025		149	4,460
Md. . . .	117,347	138,359		2,903	2,674	Vt. . . .	40,250	22,708		709	798
Mass. . . .	268,784	247,885		2,993	11,058	Va. . . .	49,356	102,824		783	1,060
Mich. . . .	339,097	285,151		8,139	16,120	Wash. . . .	167,244	183,388		6,868	22,800
Minn. . . .	179,544	179,152	290	7,793	20,117	W. Va. . . .	143,124	140,403		175	6,140
Miss. . . .	4,253	80,422			1,484	Wis. . . .	221,323	193,042		7,166	27,846
Mo. . . .	369,339	398,025		3,884	14,612	Wyo. . . .	21,698	28,316		373	1,453
Mont. . . .	66,750	101,063	298		9,564	Total . .	8,538,221	9,129,606	41,894	220,506	585,113
Neb. . . .	117,257	158,827		2,952	7,141	Plurality .		591,385			

Examples

1. If the vote for Taft and Roosevelt in 1912 had been combined, what would have been the result of the election in electoral votes?

2. Would the result have been changed if all of the Socialists and Prohibitionists had voted for Roosevelt?

3. What was the least number of votes distributed in different states that would have elected Roosevelt if changed from Wilson to him?

4. What was the least number of votes, if changed from Wilson to Hughes in 1916, that would have reversed the result? Find similar facts for 1920 and 1924.

5. Secure the election returns for President in 1920 and 1924 and determine the smallest number of votes which if rightly distributed would have changed the result.

Equal Representation

Equality of representation is a basic principle in this country. Representatives in Congress and in the state legislature should represent an equal number of people or as nearly so as may be possible. The method of apportioning representatives is to take the number to be elected and divide the whole population by the number to see how many people each representative should represent.

After each census the United States Congress decides how many members there shall be in the House of Representatives. Then the total population of the United States is divided by the number determined upon and the result is the number whom each representative is to represent. Thus in 1921 it was decided that there should be 435 representatives. The total population divided by 435 equals 243,013, the population for each representative. On this basis the representatives were then apportioned among the states, each state being allowed at least one member regard-

less of population. The state legislature determines the districts in the state.

The basis of representation for each census since 1790 is given in the following table.

TABLE 140. — APPORTIONMENT OF REPRESENTATIVES: 1790–1920

YEAR	POPULATION FOR EACH REPRESENTATIVE	NUMBER OF REPRESENTATIVES
1790	33,000	106
1800	33,000	142
1810	35,000	186
1820	40,000	213
1830	47,700	242
1840	70,680	232
1850	93,423	237
1860	127,381	243
1870	131,425	293
1880	151,911	332
1890	173,901	357
1900	194,182	391
1910	211,877	435
1920	243,013	435

Examples

1. Apportion the 435 representatives among the states on the basis of population in 1920, giving to each state at least one representative.

2. How many representatives in your state? Are the districts approximately equal in population?

3. How many people are there in each district in your state?

4. Apportion the 435 representatives in Congress among the states on the basis of the vote cast in 1912. How does this compare with the apportionment on the basis of population?

5. There are two senators from each state regardless of size. How many people does each represent?

TABLE 141. — APPORTIONMENT OF CONGRESSIONAL REPRESENTATION: RATIOS UNDER THE CONSTITUTION: AND AT EACH CENSUS, BY STATES: 1790–1910

(Source: Reports of the Bureau of the Census, Department of Commerce)

STATE	CONSTITUTION	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910
	30,000	33,000	33,000	35,000	40,000	47,700	70,680	93,423	127,381	131,425	151,911	173,901	194,182	211,877
	Representation													
Alabama				1	3	5	7	7	6	8	8	9	9	10
Arizona														1
Arkansas						1	1	2	3	4	5	6	7	7
California							2	2	3	4	6	7	8	11
Colorado										1	1	2	3	4
Connecticut	5	7	7	7	6	6	4	4	4	4	4	4	5	5
Delaware	1	1	1	2	1	1	1	1	1	1	1	1	1	1
Florida							1	1	1	2	2	2	3	4
Georgia	3	2	4	6	7	9	8	8	7	9	10	11	11	12
Idaho											1	1	1	2
Illinois				1	1	3	7	9	14	19	20	22	25	27
Indiana				1	3	7	10	11	11	13	13	13	13	13
Iowa							2	2	6	9	11	11	11	11
Kansas									1	3	7	8	8	8
Kentucky		2	6	10	12	13	10	10	9	10	11	11	11	11
Louisiana				1	3	3	4	4	5	6	6	6	7	8
Maine				7	7	8	7	6	5	5	4	4	4	4
Maryland	6	8	9	9	9	8	6	6	5	6	6	6	6	6
Massachusetts	8	14	17	13	13	12	10	11	10	11	12	13	14	16
Michigan						1	3	4	6	9	11	12	12	13
Minnesota								2	2	3	5	7	9	10
Mississippi				1	1	2	4	5	5	6	7	7	8	8
Missouri					1	2	5	7	9	13	14	15	16	16
Montana											1	1	1	2
Nebraska									1	1	3	6	6	6
Nevada									1	1	1	1	1	1
New Hampshire	3	4	5	6	6	5	4	3	3	3	2	2	2	2
New Jersey	4	5	6	6	6	6	5	5	5	7	7	8	10	12
New Mexico														1
New York	6	10	17	27	34	40	34	33	31	33	34	34	37	43
North Carolina	5	10	12	13	13	13	9	8	7	8	9	9	10	10
North Dakota											1	1	2	3
Ohio			1	6	14	19	21	21	19	20	21	21	21	22
Oklahoma													5	8
Oregon								1	1	1	1	2	2	3
Pennsylvania	8	13	18	23	26	28	24	25	24	27	28	30	32	36
Rhode Island	1	2	2	2	2	2	2	2	2	2	2	2	2	3
South Carolina	5	6	8	9	9	9	7	6	4	5	7	7	7	7
South Dakota											2	2	2	3
Tennessee		1	3	6	9	13	11	10	8	10	10	10	10	10
Texas							2	2	4	6	11	13	16	18
Utah												1	1	2
Vermont		2	4	6	5	5	4	3	3	3	2	2	2	2
Virginia	10	19	22	23	22	21	15	13	11	9	10	10	10	10
Washington											1	2	3	5
West Virginia										3	4	4	5	6
Wisconsin							2	3	6	8	9	10	11	11
Wyoming											1	1	1	1
Total	65	106	142	186	213	242	232	237	243	293	332	357	391	435

Examples

1. Compare the number of representatives in your state with the population at each census.

2. Compare the representation of all the states at each census with the quota for a representative.

Apportionment of Representatives in State and City

State senators and representatives are generally apportioned to the counties of the state on the basis of population. The counties being unequal in population, the process is difficult. A county may have enough population for a senator, and half enough for an additional senator. If only one senator is given to such a county, the county is under-represented. If two senators are given, the county gets more than its share. In making an apportionment reasonable equality is all that may be expected.

Representatives in the city council, unless elected by the vote of the whole people, are apportioned in like manner so that each shall represent approximately the same number of people.

Examples

1. How many people should each representative and senator in your state legislature represent?

2. How many state senators and representatives are there in your state? Take a map of your state showing the boundaries of counties and then divide the state into senatorial districts as nearly equal as possible on the basis of population.

3. Do the same for representative districts.

4. Are there inequalities in the districts?

5. How many people are represented by each member of your city council?

Delegates to National Party Conventions

Candidates for President and Vice President are nominated in conventions to which the parties in each state elect delegates.

The basis up to the present has been that each state was entitled to as many delegates as it had senators and representatives in Congress. Territories are also allowed delegates in similar proportions. On this basis there were in the Republican and Democratic conventions of 1924 the following:

Table 142. — Representation in National Party Conventions

[Source: Proceedings of Republican and Democratic Convention: 1924]

States and territories	Democratic	Republican
	Number of votes	*Number of votes*
Alabama	24	14
Arizona	6	8
Arkansas	18	13
California	26	28
Colorado	12	14
Connecticut	14	16
Delaware	6	8
Florida	12	10
Georgia	28	17
Idaho	8	10
Illinois	58	60
Indiana	30	32
Iowa	26	28
Kansas	20	22
Kentucky	26	26
Louisiana	20	12
Maine	12	14
Maryland	16	18
Massachusetts	36	38
Michigan	30	32
Minnesota	24	26
Mississippi	20	12

TABLE 142. — *Continued*

STATES AND TERRITORIES	DEMOCRATIC	REPUBLICAN
	Number of votes	*Number of votes*
Missouri	36	38
Montana	8	10
Nebraska	16	18
Nevada	6	8
New Hampshire	8	10
New Jersey	28	30
New Mexico	6	8
New York	90	92
North Carolina	24	22
North Dakota	10	12
Ohio	48	50
Oklahoma	20	22
Oregon	10	12
Pennsylvania	76	78
Rhode Island	18	12
South Carolina	10	11
South Dakota	10	12
Tennessee	24	26
Texas	40	23
Utah	8	10
Vermont	8	10
Virginia	24	16
Washington	14	16
West Virginia	16	18
Wisconsin	26	28
Wyoming	6	8
Alaska	6	2
District of Columbia	6	2
Hawaii	6	2
Porto Rico	6	2
Philippines	6	2
Canal Zone	2	
Total number of delegates	1094	1068

Many have argued that the fairer plan would be to apportion the delegates among the states on the basis of the vote cast for the party in that state.

In the Republican Convention a majority nominates the

candidates, but in the Democratic Convention a candidate must receive two-thirds of the delegates to win.

Examples

1. Under the plan heretofore in use, how many people does each delegate represent in each state?

2. How many Republican voters does each Republican delegate from each state represent? How many Democratic voters does each Democratic delegate represent in each state?

3. How many delegates in each party convention would there be from each state if they were elected on the basis of the party vote in each state?

4. Find the smallest number of states required to nominate a candidate in the Republican and Democratic conventions.

Sources for Research

The summary of the election returns is found in the *World Almanac*, the Chicago *Daily News Almanac*, and the *Statistical Abstract of the United States*. Local information may be obtained from the city or county clerk's office or from special election commissioners where such officers have charge of elections. Details of election for the state may be obtained from the Secretary of State at the state capital.

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